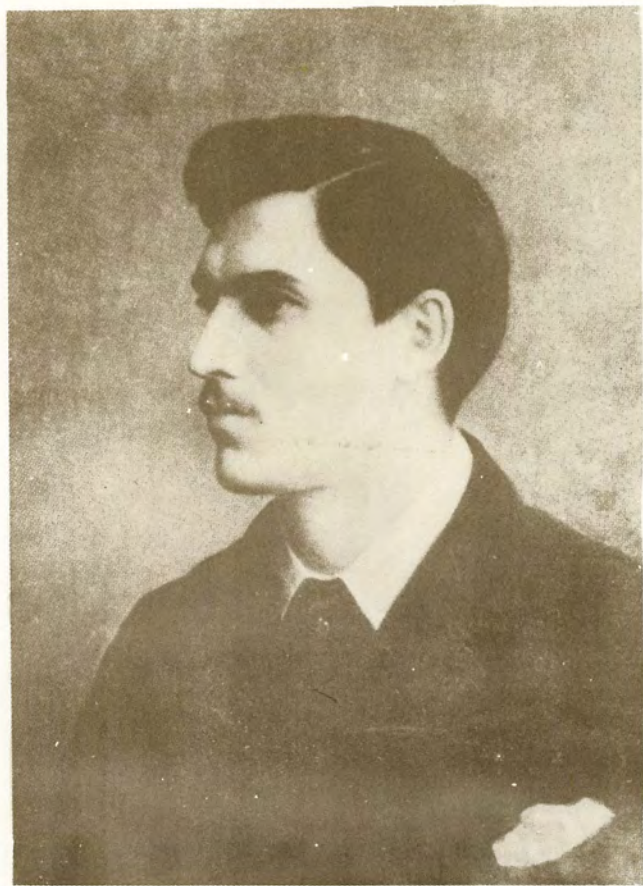


PART II

COURTSHIP, MARRIAGE, AND LATER YEARS

By GERTRUDE ZIANI DE FERRANTI



SEBASTIAN ZIANI DE FERRANTI AT THE AGE OF 17.

From a portrait painted by his sister Wanda.

COURTSHIP, MARRIAGE, AND LATER YEARS

I SHALL never forget our first meeting. As my father was leaving for the City one morning he said to my mother: "I am bringing a very clever young man I am interested in home to dinner to-night. Be sure you have a good dinner, he looks half-starved."

I was twelve years old, with a child's healthy appetite. Pity for the "half-starved" young man was mingled with joyful anticipation of a good dinner to be followed by an ample dessert—in which I looked forward to a share.

Our home life in the eighteen-eighties was very different from the home life of the children of to-day. I attended the Hampstead High School with my elder and younger sisters. We came home for lunch and tea. After tea we had home-work to do. Our parents dined at 7.30 and my sisters and I joined them for dessert.

That evening when we went into the dining-room for dessert my father introduced us as his four daughters. I don't think that the "very clever young man" noticed any of us particularly. But I know I looked at him, and then looked again. He had such a wonderful head and face and such a pleasant voice. He certainly looked as though a good meal would do him no harm. As I munched nuts and apples I wondered why he was so thin.

He came again to dinner a few weeks later. I thrust open the door of the cloak-room and then paused, uncertain. My father and the dark-eyed young man were washing their hands. My father's words were, as usual, to the point, though not perhaps complimentary: "Oh, this is Gertrude, my second daughter—the best-looking in the family, but an awful little devil." Basti

never forgot the strange introduction, and from that time he always noticed me and, as he told me later, it was then that he fell in love with me.

In August 1883 my father took a house at Ostend for two months and invited Basti for his fortnight's summer holiday.

The day he arrived at Ostend my father drove in a little one-horse shay to meet him at the boat. I longed to ask if I might accompany him. But in the year 1883 little girls had to be discreet. Parents were parents. And I think I stood rather in awe of my father. He was very kind-hearted, but also very quick-tempered. It was wonderful how Basti talked to him without timidity or reserve. He was a good listener too, and my father was delighted to have someone intelligent to talk to about the things that interested him.

At Ostend my sister and I used to get up before breakfast and go paddling with Basti. He always said he saved my life there. We had gone to bathe at Mariakerke, a little village near Ostend. The sea was rough. A huge wave knocked me over. Basti rushed into the sea and picked me up. I was frightened and out of breath, but probably in no great danger.

One day—the day I remember best—Basti and my eldest brother took me out with them on a long walk to Bruges. We got more than half-way when I began to feel very tired. It seemed as though we should never get to the end of those fourteen or fifteen miles. "We can get a train from Bruges," they assured me, so on we toiled. I shall never forget the pleasure of sitting down in a little restaurant at Bruges. We had coffee and rolls-and-butter. It was then found that my brother and Basti had each only a small sum of money. When they had paid the bill there was very little left. Breathless, we hurried to the station wondering whether

enough remained to pay our fares. There was just sufficient for three third-class singles. Some situations are too terrible to contemplate. Had we not had enough to return by train I do not know what we should have done. As it was, our return to the family roof was no triumph. My parents blamed Basti and Gerard for taking me, and me for going with them. I was so hungry at supper and so upset that I had a violent choke. I thought my punishment was to be death by suffocation, but at last I got my breath back.

Many years afterwards my husband had occasion to visit Ostend. In a letter he wrote to me at that time his thoughts returned to that long walk:

It was bright moonlight when we arrived at Ostend and I could therefore see everything as we steamed up the harbour with the wooden jetties on each side. You can easily imagine how it brought back to me that delightful time we had there so long ago.

Do you remember how jolly that first morning was when we all went out paddling together on the sands on the far side of the lighthouse, and the other promenades that we had before breakfast until you, Madam, were told that it was not quite the thing to do this and had to stay at home in consequence? We had 20 minutes to spare at Ostend and so had some coffee before getting into the train which left at 12 midnight.

The railway line runs for some distance along the broad canal along which Gerard and you and I took our famous walk to Bruges which seemed as though it would never come to an end although it was so pleasant. I remember how tired you (poor little thing) were when we at last got in to Bruges and how I gave you nearly all the milk at the restaurant we had supper at as I was afraid the coffee would be too strong for such a little girl.

The funniest and most pleasant part of the journey was the ride home when you most naturally sat with my arm

round your waist and you and I both quite considered it the proper thing.

Despite occasional storms my parents had grown very fond of Basti. He was always so calm and so reliable. In a crisis he could be relied on to do the right thing. While at Ostend the cook my mother had taken out with us was found insensible on the kitchen floor. Had she been merely dead the situation might have been more easily tackled. But she was dead-drunk. My father stormed, my mother was at her wit's end. Cook lay and snored. Basti somehow hoisted her into a chair, and as soon as she could stand, got a carriage, bundled her in and shipped her home to England.

During those years I can remember little except events connected with our summer holidays. They were great events—especially the fortnight that Basti spent with us. In 1884 we went to Dawlish. Basti travelled down with us. In those days there were no corridor trains. Our compartment was quite full: eight children, my father, mother, and an aunt who lived with us, and Basti. My father had rented a large furnished house opposite the Gardens. The basement kitchen was very dark, and over the walls walked large black beetles. Basti went down armed with a lighted taper and a shovel and made war on them. We had hard work sweeping up the corpses.

While at Dawlish Basti hired a boat and taught us to row. He also taught me to swim. One day we all went for a long walk to a neighbouring village, Little Haldon. Basti and I strayed from the flock, and it was there he gave me his first kiss and told me that some day he wanted me for his wife.

On a later holiday at Cowes, in the Isle of Wight, when we were all out in a boat, we saw my two little brothers walking along the parade, one on each side of

their nurse. Basti beached the boat so that the boys could come with us. That day the fates were against him. Perhaps the boat was rather overloaded. Anyway, we stuck on a submerged rock in shallow water and no pushing or pulling would get us off. Finally the boatman had to come in another boat and take us ashore. It was a great adventure and not nearly so dangerous as it seemed to us children. But it somehow got to the parents' ears and my father stormed. All the blame was laid on poor Basti. To hire a boat at all was a daring escapade in my father's eyes, and then to take the boys from their nurse and get them shipwrecked!

I was learning the piano and Basti was very anxious I should make progress. So he used to come downstairs before breakfast to make sure that I practised properly. The intention was excellent; I am not sure that the method was well chosen. My thoughts were rather distracted. . . .

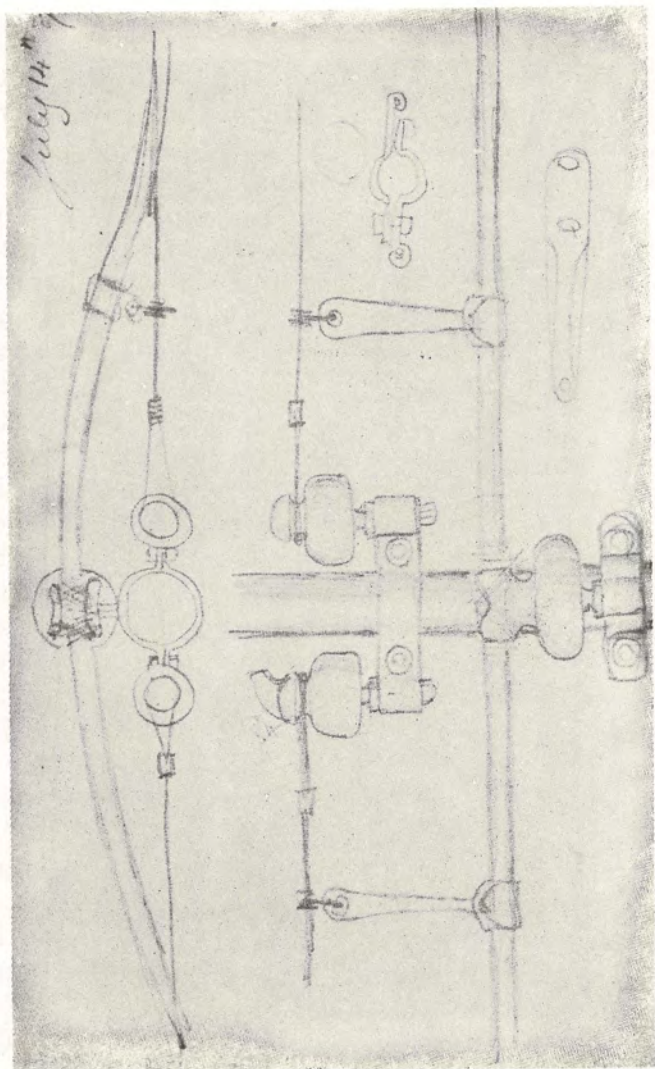
On returning to school after this holiday at Cowes the mistresses found that I was unable to see the blackboard clearly unless sitting in the front row of the class. This resulted in my being taken to an oculist, who prescribed glasses for short-sight. In those days opticians did not study appearance, and I was given a hideous pair of spectacles. The first time Basti saw me in these he, being such an artist, was horrified. He at once set to work to design and make for me something lighter. He made them of pianoforte wire as fine as possible and gold-plated them. They were most successful—so beautifully light and comfortable. The first pair he made by hand with pliers. Basti then invented three machines for making these spectacles. For many years he supplied my father, Mrs. Crompton (Colonel Crompton's wife), and the

late Sir Wm. Preece with them; also various members of my family.

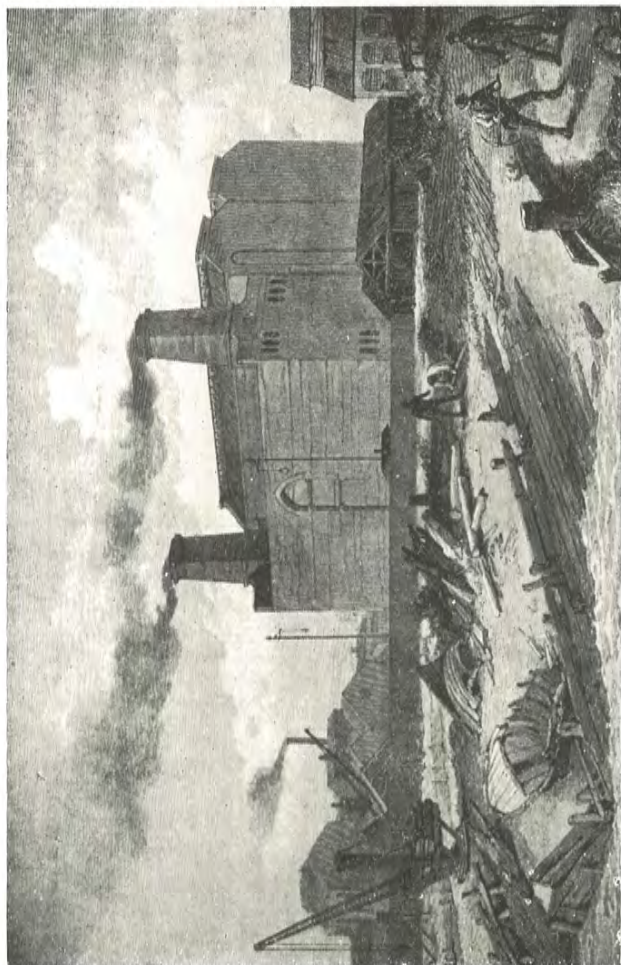
As I was always very bad at "Maths" (and yet once gained the Mathematical Prize!) I laughingly told Basti that it must have been the result of my wearing these spectacles he had invented for me.

I have good reason for remembering a visit my parents made to France at Whitsuntide in 1886. There was business on hand in Paris connected with electric lighting. It was arranged that Basti and one of the girls should accompany them. Basti took it for granted that I would be the favoured one. But nothing was said except concerning business matters. When, on meeting them at the railway station, he found they were taking my sister Rachel instead of me, though outwardly calm, he was inwardly raging. She was very seasick, and though he looked after her with the quiet good temper characteristic of him, that crossing determined him to face the dangers of "declaring his passion." Perhaps he feared that otherwise it would be the wrong seasick daughter next voyage. On their arrival in Paris Basti told my father he wanted me for his wife. It was a terrible ordeal for him. My father, as a lawyer and a man of the world, did not look favourably on prospective sons-in-law with little or no money. He was genuinely fond of Basti and knew him for the genius he was. But the progress of genius is uncertain; it does not always climb to the top of the ladder. So he did not say "yes" and he did not say "no," but he turned the conversation to the electrical business in hand.

Soon after their return I was sent for. My father was doing a lion walk up and down the room; my mother was looking anxious and tearful. I felt I was suspected of having done something terrible, though I



SUSPENDER GRIP FOR CABLES
(Facsimile of Original Sketch)



RIVERSIDE VIEW OF THE DEPTFORD POWER HOUSE
(Taken from an Early Number of the "Illustrated London News")

could not for the life of me make out what it was. What *was* my crime? I waited and waited. And at last, after much talking round and about, it came out. Basti had told them he wanted to marry me! Evidently I had been "encouraging" him. What had I done? Had I written to him? Had I ever been with him alone? It seemed as though they suspected me of having committed all the wickedest sins mentioned in the Ten Commandments.

At last the interview was over. And after that our courting became easier. Basti was actually allowed to have an interview with me alone in the dining-room (my sisters hovering about outside and trying to listen at the keyhole). He told me how happy he was to be really engaged, and that he hoped he would be able to marry me as soon as I was nineteen, as he knew my father would not let him marry me before.

The summer of 1887 we spent at Bournemouth. Looking among the things of the past I find the letters that were exchanged between us during those days. The interest of "love letters" must always be chiefly for the two persons concerned. There was an age, not so long ago, when it was considered the height of indelicacy to publish such letters. Even in the case of popularly acclaimed poets, such as the Brownings, the reading public was divided into two camps, one crying loudly, "They ought to be published," and the other, "They ought not." Surely if letters have anything to teach, any light to throw upon character or the intimate problems of life which shift and change but never pass away, then letters between lovers need not, when there is sufficient cause for publishing them, be thrust away out of sight with prudish shame? For lovers are—or honestly believe themselves to be—entirely sincere, and the new experience they are

undergoing forces them to look within themselves with deeper searchings of heart than they have known hitherto.

We were engaged; we were very happy, and the letters that passed between us about trivial things have, I think, in their simple way captured some of the sunshine of those days.

I remember about this time Basti told me of his wonderful idea for securing overhead cables by what he called a "suspender grip," and this was probably the first invention of his that I ever took interest in. The patent for this, owing to its having been badly drawn up, was of no commercial value, and the idea was soon copied and is still used all over the world.

Although the idea now seems so simple, what a very useful invention it has been, and still is. In addition, it has never been improved upon by anyone else.

The annual exodus to the seaside was the great event of the year. Carriages or an omnibus had to be hired to take us to the station, and my father, most excitable of men, used to work himself up into a fine fury of apprehension while we waited for the bus, fearing we should miss our train or lose part of our luggage. Something of all this is reflected in my first letter from Bournemouth.

MY DEAREST BASTI,

We arrived here quite safely yesterday afternoon. We started very comfortably from St. Fagans and got away quite calmly. We had three carriages and the cart followed behind with the luggage, so we looked rather like a procession. . . . We all like Bournemouth and the house very much. I think it is a jolly house and I think Bournemouth would be splendid if only you were here. It seems ages since I saw you and I felt very miserable last night. I should like to see you if only for five minutes. . . . The

COURTSHIP, MARRIAGE, AND LATER YEARS

sitting-rooms are very nice and in the drawing-room there is a very nice little corner separated by curtains which Uncle William says "Is meant for you and I."

In those days I had not mastered the old grammatical difficulty concerning "I" and "me," over which many professional writers (including Shakespeare) have come a cropper.

In Basti's reply he playfully rubbed in that mistake:

I must however disagree with you in one thing. And that is that I am sure the corner in the drawing-room is not meant for you and I, but I think it will do beautifully for you and me. Now, am not I cruel to write this, it is really one of those lessons which ought to be taught *personally*: don't you think so? . . . You know I write so horribly myself that it is quite absurd for me to say anything about your very neat letters. . . .

But that "I" and "me" still haunted me:

MY DEAREST BASTI,

I received your letter this morning and was sorry to hear that I had made such careless mistakes. . . . I told Mama about the spelling and Aunt Addie wanted me to let her read my letters so that I might correct the faults. . . . You must not think I mind you telling me my mistakes because I would much rather you did and I think it very kind of you to take the trouble. . . .

I did *not* avail myself of my aunt's kind offer to read my letters. The "Uncle William" referred to in my letters was a complete contrast to his wife. (They were on a visit to us from the South of France, where they lived.) She was Voltairian and of an exuberant, excitable temperament that led to frequent domestic thunderstorms. He was a non-stop talker, never silent except when reading *The Times* (or dozing behind it), and his hobby was religion of an extremely Low Church

variety. He read the Greek Testament every day, and his shelves groaned under volumes of evangelical sermons. He was fond of children, and his serene good temper was never ruffled by anything or anybody. Chapels attracted him more than churches, and in my next letter to Basti I wrote:

The whole family went to church this morning excepting Papa and Gerard. Uncle William wanted to go to the Wesleyan Chapel, so I had to go with him. I do not think either of us will ever want to go there again. . . .

Commenting on this Basti wrote:

Bournemouth boasts more forms of religious belief than any other town in the kingdom so that there is ample scope in this direction for being suited most completely. It would be interesting to know what the objection to this particular one was?

At that time I had thought very little about religion. I went to church with my mother and sisters because it was the custom and the right thing to do. But I knew that I did not like the religion of Mr. Wesley:

You ask me the particular objections to the chapel I went to. I did not like any part of the service; it was quite different to our church service. They did not use the Church Prayer Book, and as for the hymns I thought we should never get through them, as the Minister would read every verse through before we sang it.

In his next letter, after telling me about his work at the Grosvenor Gallery, Basti continued:

It does indeed seem wonderful that it should have been three years ago that I managed to do the most difficult thing I have ever attempted and told or tried to tell my precious darling how *much* I loved her. You know the difficulty was principally caused by the seeming uselessness

COURTSHIP, MARRIAGE, AND LATER YEARS

of saying what seems to be the most natural thing in the world and hardly required to be said at all. . . .

And then he returned to the subject of religion, for which he had a far deeper feeling than I:

I notice in your letter that you speak of a "very nice church" and also you mention the reasons for not *liking* the Wesleyan Chapel. *May* I tell you that it is not a question of likes or dislikes or of nice or unpleasant that we should consider in a matter of Religion, but we should try and endeavour to do that which is most pleasing to God even if it be very difficult. Perhaps, my dear Gertrude, you have never thought or rather been taught this, but you know it is the most important thing in our lives. . . .

All this while Basti was hard at work at the Grosvenor Gallery. It was an anxious time for him, and the incident referred to in his next letter to me was not perhaps surprising:

I received your letter this morning all right; so far so good and put it in my pocket after having read it. Since then I am quite at a loss to know what has become of it. . . . I also cannot find some important instructions from Lord Crawford so that I suppose they are together.

The missing letter was subsequently found on the board-room table at the Grosvenor Gallery. Meantime I had some bad moments. I pictured some young engineer opening what he thought were Lord Crawford's important instructions and finding my letter, laughing at it perhaps. . . . That would be horrible! So I sent him a rap on the knuckles:

I received your letter this morning and have not, like you, lost it. I cannot help thinking it was very careless of you to have lost my last letter. You do not know who may read it, which is horrid for me. In future I must *order*

you not to carry any of my letters about or else I shall write to you short stiff letters that I should not mind anyone reading. Now, my darling, I have done lecturing you. . . .

Although Basti was regarded as a prospective son-in-law, the idea of our marriage was not very acceptable to my father. Basti was obviously the most single-minded of men, caring very little for worldly prospects and seeking only to use his talents in the best way, and for the best purposes. But when it was a question of entering the family, suspicion attached to him. He was a Catholic and my father did not like Catholics. He was a genius, but would he be able to support a wife?

Afterwards all these doubts vanished and Basti and his father-in-law became the best of friends and continued so during life.

In his next letter to me there is mention of a little rift that occurred. Basti and his mother and sister were contemplating a move from West Kensington to Hampstead. It was evident that he would have to support them since his father's business had failed. After referring to difficulties at the Grosvenor Gallery, he continued:

I spoke to Mr. Ince about taking a house at Hampstead and he agreed with me that it would be very convenient. He did not however express the least approval or disapproval of the idea which seems very strange. If I had done this to anyone I should have meant that I most positively did not want them. I am afraid that your respected parents do not altogether like my having you, my darling, but I suppose I must try and find out what it is and remove the objection. . . .

In the year 1887 a curious new machine called a

“bicycle” was beginning to be seen on the roads. It consisted of a heavy iron frame on two wheels, propelled by clumsy pedals that engaged a strong heavy chain. The wheels had thin rubber tyres (Mr. Dunlop had not yet dreamed his great dream), and fixed on either side of the hub were foot-rests for greater ease in going downhill. In back streets and quiet lanes men of an adventurous spirit were trying to master the art of riding these machines. While the family were safely out of the way my father had bought one of these “safety” bicycles (called “safeties” to distinguish them from the dangerous high-wheeled variety to which you climbed aloft like a monkey swinging himself to a tree-top). Basti had been taken into strict confidence concerning this adventure. His next letter refers mysteriously to it:

After seeing the house I am going to meet Mr. Ince and assist him in a most arduous undertaking. What? I am sure you will never guess. Take care you do not let out anything about this if you wish to keep in *my good books*. I was assisting at the same operation last night and ran, I should think, about seven miles at a slow trot! I also had a try myself on a 56" but you must forget all about this as your ladyship might object.

In these days of aeroplanes it seems a curiously remote world in which “push-bikes” could be regarded as daring and dangerous. I replied cautiously and with a word of warning:

I could not understand if it was a bicycle or a tricycle that you and papa were trying the other night, but I do hope you will be careful and I am sure I hope *you* will never ride a by—bicycle (I don't know how to spell it).

I added an item of angling news which lovers of Izaak Walton would not wish omitted:

SEBASTIAN ZIANI DE FERRANTI

John and Freddie [a cousin] went fishing yesterday and caught two *very* small fish, rather smaller than a sardine. John had one and this morning he took Freddie in the other next door on a plate. . . .

From bicycles and the joys of life at the seaside we drifted back to the subject of religion. Basti was troubled about me. He longed for me to belong to his Church, but he did not wish that I should be persuaded against my will.

Although I did not at all like the Wesleyan Chapel, I suppose I had written in support of the Church in which I had been brought up. For in one of his letters he wrote:

I very much admire the staunch way in which you stand up for your religion. . . . The last thing in the world that I should like to do would be to persuade you to become a Catholic. My dearest Gertrude, this is a thing which God only could really persuade you to do and is quite beyond even the most fascinating human power. Changing in itself is hateful but you must remember that (speaking apart from the present subject) changing to a higher or better thing is no longer changing but advancement, which we all must aim at.

There must undoubtedly be one way which is the *best* and consequently most pleasing to God. Do you believe that this is the position of the Church of England and is it because of this that you belong to it? Or is it, as I hope it may not be, that you are a member of that Church because you were brought up in it and regard changing in an incorrect light and consequently remain as you are because it is *good enough*.

You may perhaps consider that I am constantly worrying you about your Religion, but it is a very serious matter and I only speak as I have done because I love you so dearly, my precious darling, and know so well where to look for the truest happiness:

“Life is only bright when it proceedeth
Towards a truer, deeper life above.
Human life is sweetest when it leadeth
To a more divine and perfect love.”

Which I think you will find in your book of poetry by A. A. Proctor. I was reading it through yesterday and it struck me very much. You will think perhaps that it is not really so and feel a little sad. I believe *I* have done, at one time, because I thought that if I loved God truly I could not love you as you deserved. But it is *not* so. I am sure that the more of our love we can give to God, the more He will give us for each other and so, notwithstanding our troubles, we will be very happy. About Religion I only want you to inquire most earnestly. To find out the meaning of a great deal that perhaps you have not even thought of. To see in fact if there is anything which you have no idea of at all. . . .

I pondered that letter many days before I answered it. It was the first letter I had received that probed deeply into religious matters. Hitherto I had taken religion as a matter of form and custom. Now I was faced with the problem of making a decision. And there was no one to whom I could turn for advice or sympathy.

In my next letter to Basti the result of those mysterious activities in which he had been aiding and abetting my father was revealed:

Papa and Gerard arrived quite safely yesterday evening at about half-past nine. Papa was dreadfully stiff and tired and could scarcely get upstairs to bed. He is all right to-day but rather stiff. They for once did not have any accidents. . . . I wonder if you are writing to mother now [about his proposed visit] and if (as Rachel says) you are writing with your tongue out. . . .

To the latter inquiry he replied:

SEBASTIAN ZIANI DE FERRANTI

As I wrote my letter to Mrs. Ince in the morning it was *I* who enlightened you about Rachel and my tongue: it is indeed most curious.

I had evidently defended the Church of England. And in his reply he very neatly turned the tables upon me. In the end I doubt whether it was his arguments—though they were undoubtedly good ones—that influenced me so much as his life.* For I soon began to see that his religion was a great and true thing to him, and his unselfishness and the readiness with which he was always anxious to help anyone in trouble or suffering showed me that the Catholic religion is not dead and formal but a living faith and continual inspiration. Referring to my letter he wrote:

I want to tell you therefore that part of your letter was very satisfactory. Firstly that you believed that there was a form of religion that was the *best* and secondly that you belonged to the Church of England because *you* believed it to be the best. Now dearest Miss *if* your religion is the best *mine* cannot be so pleasing to God as yours and therefore I do not stand as good a chance as you do and therefore if you really *believe* what you say and love me as truly as I believe you do; it is your duty to teach *me* what you know and convert *me* to these greater blessings.

Towards the end of the holiday at Bournemouth the weather turned wet. A large family driven indoors by stress of weather needs amusement. Somebody suggested theatricals, and an echo of our doings is sounded in my next letter:

As yesterday it began to rain directly after breakfast, we thought we would get up a scene out of Shakespeare, so Pattie and I bought a very nice book of all Shakespeare's Plays for only 10d. We took a scene out of *Julius Caesar*, but we found one day was not enough to learn it in, so

COURTSHIP, MARRIAGE, AND LATER YEARS

instead, we had some very good tableaux and a charade. As it was the Booty's last evening, we had them in as audience. They quite enjoyed it. The tableau they all liked best was "Meg Merrilees" (out of one of Scott's). Rachel was Meg and I was the dead man. I had my face all floured and it looked quite white. . . .

On the 31st of August of that year (1887) Basti had a triumph in successfully lighting Charing Cross Underground Railway Station a day before the scheduled contract date. In addition to this, he secured a contract for the installation of three hundred and sixty 20-candle-power lamps at the Prince of Wales' Theatre, where the comic opera *Dorothy* was being produced.

It was settled that we were to be married early in 1888 and at last the date was fixed—April 24th. We were to be married at St. Dominic's Priory, Hampstead. I remember going with Juliet, Basti's sister, to the Priory Church to make arrangements with Father Austin Rooke for our marriage.

My father grew more and more fussy as the day of the wedding drew near. He was so afraid that Basti (fond as he was of him and keenly appreciative of his genius) might not win through to financial success. And though not at all interested in religious problems, he hated the idea of one of his children marrying into a Catholic family.

On looking through Basti's sketch-book for the year 1888, which is full of sketches of machinery, there is one page in it which I reproduce here (p. 88). The date given was our wedding-day.

Up to the last moments my father kept grumbling about "these Roman Catholics" and declaring that he would not go to the church to give me away. This was very distressing to me, but my mother, who was

April 24th, 1888
comes here.

NOTE IN HIS DIARY RE WEDDING-DAY

COURTSHIP, MARRIAGE, AND LATER YEARS

accustomed to his excitable temperament, took no notice and assured me that it would be all right when the time came.

It was not very fine on April 24, 1888—rather foggy until, later in the day, a wind sprang up. I do not fancy the sun shone on us, but I feel sure it made no difference as very few could have had a happier married life. I remember Mother calling me about 7.30 in my little bedroom with the gas-bracket, leading out of my father's and my mother's room. I remember the gas-bracket because the tap fitted badly and would turn round and round. In order to be sure the gas was turned off every night before going to bed I lighted a taper, putting it close to the tap to see that it did not light a flame.

But my first thought that morning was not the gas, but the weather. My second a little fear at having to drive to church in a carriage alone with my father; not that I was not very fond of him, but because he got so excited over trifles. I loved him in more ways than one, for was it not he who had brought this great happiness into my life?

The wedding morning seemed to me very long (we were married at two o'clock) and full of excitement, with presents arriving up to the last moment. I had no fear of the future with Basti, but that wedding-day rather overawed me. My sisters and I were all given cherry brandy (we had never tasted it before) and some light lunch. Then came the dressing. I was not much interested in that. I just longed to get it all over and get away to be with my dearest.

I think the worst moment of the day was when my mother and brothers and sisters had all gone to church and I was left alone with my father. He was, I could see, quite perturbed at losing me, but at the same

SEBASTIAN ZIANI DE FERRANTI

surprised at seeing Mr. W—— that he couldn't sit down until Mama asked him to take a chair. We also had B—— and his brother ("the hairdresser"): they nearly talked our heads off and we were very glad that they would not stay to tea. Constance H—— saw the marriage in the paper, and she said what a very grand name you had got. I think the waiters behaved very badly at the wedding. They would take everything away, even the flowers, but Mama managed to secure two very nice cakes by hiding them in the cupboard, and cook said that the old waiter got Mary and Lizzie to look hard out of the dining-room window at the bride's departure while he himself put a large piece of wedding-cake into his bag. A's smallest baby has got the measles, which they think is from the vaccination, so they are rather in a state about it. I must finish up now as I have got to take Pattie out for a walk.

With best love I am,

Your ever loving sister,

RACHEL.

We stayed at Folkestone two days as the sea was too rough to cross over; in those days the boats were very small paddle-steamers. I remember well what care Basti took of me (as he always did) so that I should be in the best place on the boat and well wrapped up.

On our arrival in Paris (where we stayed at the Hôtel Lille et D'Albion, rue St. Honoré), Monsieur Patin met us. This gentleman was managing a small electrical works that we had at Le Havre. I am afraid I rather objected to him, as he took up so much of my husband's time in Paris. In fact, through him we had quite a little quarrel. I got tired of sitting alone in the hotel waiting for them to come in (I was only nineteen), so I thought I would go out for a walk and went to the Champs Elysées, and it being a nice sunny afternoon I sat down on a seat. After a few minutes two soldiers came and sat beside me and wanted to talk to me.

I then moved away to a chair, but they followed me. I got frightened and walked back to the hotel as fast as I could. On arrival I found Basti waiting and quite worried about me, not knowing where I had gone. When I told him where I had been and the soldier episode he was quite vexed with me. He said I was far too young and pretty to run about Paris alone, but he realized that I had found Monsieur Patin rather a bore. He took me to my first opera in Paris to see *Hamlet*; that was a delight: Ophelia's voice when she went mad was something to remember. My husband and Monsieur Patin had to leave me for about ten minutes or a quarter of an hour whilst they went down to the stage and orchestra to see the effects of the different lighting. That night after the opera we went to a café and whilst there a crowd surged down the street. It was the time of the Boulanger excitement. The soldiers fired on the mob, and we heard some of the people singing the *Marseillaise*. It rather alarmed me, but we stayed at the café until things grew quiet.

From Paris we went to Zürich and Neufchatel. At Neufchatel we took a boat on the lake, and as Basti had taught me to row so well I did a good deal of the rowing. It seemed rather extraordinary to the Swiss people to see a woman with the oars, and they called out "Voyez la Rameuse." Whilst at Neufchatel we paid a visit to some watch-works at the Chaux de Fonds, which was most interesting. Our visit there was to buy the little train-wheels for the Ferranti meter, which we afterwards made ourselves. Most of the places we visited were with a purpose; we had plenty of business to attend to even on our honeymoon.

We returned home via Nancy and Paris after the most beautiful and interesting holiday of three weeks.

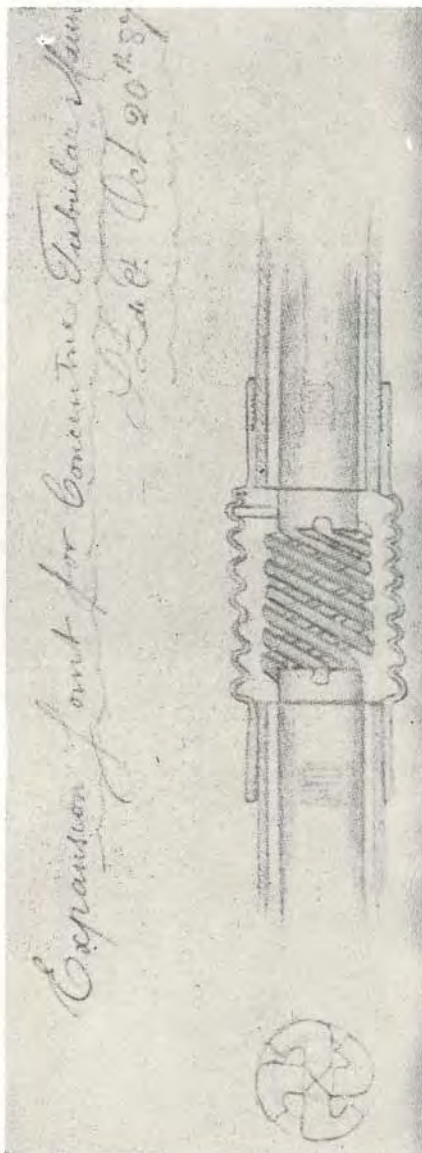
We should have stayed longer, but we had anxious wires from my father that Basti was needed at Deptford.

During our honeymoon and on the first Sunday we spent in Paris I went with Basti to Mass at Notre-Dame. From that time onwards I never went to any church but a Catholic one, although, as previously mentioned, I had not been received as a Catholic. I well remember after Mass going up on to the towers of Notre-Dame and looking down on the Seine and the quays and all the beautiful buildings of Paris.

On our return to England in May 1888 we went to our home in Fellows Road, which had been made ready for us by Madame de Ferranti, my mother, my sister-in-law, and my brother-in-law, Vincent Stephen. They had made the home so pretty, with pink geraniums in the window-boxes.

I felt very nervous at the thought of housekeeping, for I was very young and without experience, and in 1888 girls of nineteen were not cheerfully convinced that they knew everything, as are too many of the young people of to-day. My mother had engaged two good maids for me and told me I must go downstairs and see them, and that I must be sure every morning to go down into the larder and order dinner. I think she was rather alarmed lest Basti should have to live on bread-and-butter. I was very lucky in having a very nice Scotch girl as cook, who took pity on my youthfulness and helped me in my new task of housekeeping. She stayed with me for three years and was most helpful. For a few years afterwards I heard from her at intervals and then lost sight of her. But she had not forgotten us, for when my husband died she saw the notice in the paper and wrote me a very nice letter of sympathy, signing herself, "Your first cook."

The principal thing I remember during those first



EXPANSION JOINT FOR CABLE
(Facsimile from Sketch-Book)



OLD COTTAGE ON LAND AT THE DEPTFORD WORKS

months of married life was Deptford, and again Deptford. We talked Deptford and dreamed Deptford. There were many nights when Basti did not get to bed at all, staying at Deptford and snatching what few hours' rest he could in the little cottage that still stands and is used by the London Power Company. I always look upon this little building as one of the most historical spots in Deptford. So many business affairs were settled there by my husband, his staff, and the directors. As it frequently happened that he could not get home for days at a time, I used to go down and spend happy hours wandering about the site on which the Deptford station was being built, watching the men at work and having my meals in the cottage with my husband and members of the staff. It was a great boon when the directors had a private telephone laid from the works to our house in Fellows Road.

In addition to his other work, Basti was designing the buildings and plant for Deptford. We set apart one room as a studio and there Basti did his drawings. I remember tracing many of these for him, and even painting some of them. When there were no drawings to be done I painted the trestles! And he said I put as much paint on myself as on the trestles. Perhaps I did. But I know I was very happy helping him and his cousin Herbert Donner while they were at work in the studio. We had a piano there and sometimes I would sit and play to them.

In November 1888, while Deptford was still in process of building, we went for a change to Margate. Basti had not been very well and he wanted to get right away so that he might not be interrupted at his designing work. Madame de Ferranti came with us, and often, whilst he was drawing, she would read aloud. He liked to be read to or to listen to music whilst

thinking out his inventions. I remember Madame de Ferranti read us (she had a beautiful voice and read very well) *The Virginians* and *The Newcomes*; she also read *Bleak House*. Old books these, and probably not often taken from the shelves to-day, but quite unforgettable when read as Madame de Ferranti read them.

By the end of the year Deptford was nearing completion. An article in the *Railway News* of December 22, 1888, concluded:

We have no hesitation in saying that the schemes of the London Electric Supply Corporation, of which these great Works at Deptford are the centre, is the most important electric venture yet undertaken, and one which, if successful, bids fair to revolutionize domestic lighting in the metropolis. The machinery for the supply of 250,000 incandescent lamps will in a few weeks be completed, and the result will be eagerly watched by all interested in the progress of electric lighting.

That was written forty-five years ago. It is strange to think, despite our boasted progress, how many houses and cottages are still lighted by gas, oil-lamps, and candles!

In August 1889 my father and mother came to stay with us in Fellows Road as I was expecting my first baby, and Basti, who was often at Deptford, did not want me to be left too much alone. On August 13th our eldest girl was born. I remember my father (his hobby was photography) taking her photograph when she was a week old.

When the baby was five weeks old we went down to Folkestone. I remember that visit very vividly. Everything in those days moved so slowly compared with to-day (1934). I was drawn by a very ancient mariner up and down the Parade in a bath-chair. When later

members of the family were born, the proceedings were: after the seventh or eighth day, to be carried to a car and taken for a fifty miles an hour spin. It certainly brought back one's strength more quickly than the crawl along the Parade in the ancient's bath-chair.

Everything was more difficult in those days—even the feeding of babies. I couldn't continue the nursing of mine for long and then came the trouble of bottles. They were always getting cold and always having to be warmed with the aid of Clark's Pyramid Night Lights. Our nights seemed to be passed under the shadow of those Pyramids. The baby did not sleep well; neither did we. It was wonderful how Basti managed to work as he did when his nights were so frequently disturbed. Perhaps it was a blessing in disguise that he had to spend so many nights at Deptford. The baby certainly did not make rapid progress and she cried almost continually. When Basti rang up to know how we were getting on, I used to take the crying baby to the telephone so that he could hear for himself.

We had a terrible scare on Christmas Day, 1889. It had been arranged that we, Basti and I and the baby, should spend the day with Madame de Ferranti. At three o'clock in the morning we had a telephone call to say the buildings next to our works at Charterhouse Square were on fire. Things looked very ugly for a while. But they managed to get the fire out before much damage was done. It was bitterly cold weather. Next day Basti took me down to see the site of the fire. The place was in ruins and everywhere from broken walls and girders hung the longest icicles I ever saw. It was a pretty sight but terrible, and we were thankful that our works had escaped with only slight damage by heat and water.

From the time we were married until, I think, 1892,

we were comfortably off. As Chief Engineer at Deptford, Basti was receiving a very good salary. But we were unable to save much money at that time as he had to keep two homes going, one for his mother and brother and his children, and one for ourselves.

The strain of Deptford was very severe and there were times when he had to get away for his health. In February 1890 we went for a few weeks to Margate, taking the baby and nurse and also my two small brothers. We stayed in rooms at Sea View Terrace, a quiet quarter with beautiful sands opposite. Basti could not stay with us all the time. He had to go with my father to Paris and later to Leeds and Bolton. The work he liked best was inventing and improving his machinery, but he had very little time for it. There was so much travelling to be done, going from town to town to get orders, in addition to the work he was doing at Deptford. And at this he was eminently successful. It frequently happened that when the firm in the ordinary way had given up hopes of some much desired order he would go and interview the chief official concerned at the Corporation works. He invariably came back with the order. He was well known to all the heads of concerns, and they welcomed his visits. His complete confidence in himself, his courtesy and persuasive manner, were irresistible. People who had once met him never forgot him.

While speaking of Deptford, my readers may find it of interest to know who the officers of the London Electric Supply Corporation Ltd. were at that date, i.e. 1891: *Chairman*: James Staats Forbes; *Vice-Chairman*: the Right Hon. the Earl of Crawford, F.R.S.; *Directors*: Hon. Reginald Brougham, Francis Ince, Sir Coutts Lindsay, Bart., the Right Hon. Lord Wantage, K.C.B., V.C., Joseph Pyke, Arthur F. Wade;

COURTSHIP, MARRIAGE, AND LATER YEARS

Manager and Secretary: Major C. B. Waller; *Engineer:* S. Z. de Ferranti. The offices of the company were at 3 Adelphi Terrace, W.C.

Things were going well at Deptford (1890-91) and the Press was unanimous in praise of Ferranti and his work. Basti was not the man ever to seek the limelight—indeed, he often hid himself away when I thought he ought to have come forward. But, do what he would, he could not escape the notoriety that was thrust upon him. The London *Echo* of December 9, 1891, drew attention to his remarkable achievements. I think the account that appeared there of the man and his work is still of interest for it throws light on the extraordinary impetus which my husband gave to the development of electrical engineering in the eighteen-nineties:

The young engineer and man of science chosen as the subject of to-day's portrait is a man of genius. Some of his admirers call him the English Edison: but, as such comparisons are mostly useless and impertinent, I shall call him by his own name, and no other. He is a good example of the man born in due time. A few days since, at one of the official and periodical meetings of London and provincial electricians and engineers, it was prophesied that in three or four years hence there would be a million electric lights in London. Mr. Ferranti is the guiding spirit of the big undertaking, which, when complete, will be able to put two millions of lights—that is to say, of incandescent electric lights or glow lights, as they are also called—upon the London market.

Mr. Ferranti was, as I have said, born in due time. His age is, I believe 30; so that when he left school, and was appointed to his first berth in an electrical engineer's establishment—Siemen's—the era of electric lighting and of the substitution of electrical currents for steam power was about to begin. Young Ferranti's performances at school

clearly indicated his future career. The future inventor of the Ferranti "System"—or rather systems, for his inventions are so many—was educated at the Augustinian School at Ramsgate. He was an all round pupil. His Latin and Greek were not lost upon him. But his bent leant in the direction of experimental science. He was constantly hankering after experiments, chiefly in electricity. Luckily for him, the principal and masters were not hard and fast unimaginative pedagogues, who would insist upon his doing nothing but the lessons in the ordinary curriculum. They recognized his dawning talent, and they encouraged it to grow. And the masters reaped their reward, for the bright, ingenious boy fitted up the school with electric bells, which he devised from first to last with his own hand. He procured a certain quantity of ready-made raw material, such as brass and wire, but everything else—the fitting up, the electrical connections—were made by himself. He not only experimented, but he manufactured his own apparatus. The boys of the school, and the masters, hugely admitted the cleverness of young Ferranti. I believe that some of the ideas which struck the boy-inventor's mind in the Ramsgate school are now being practically developed in the hands of the men and women in Mr. Ferranti's factory, and even in the huge works at Deptford, where the London Electric Co. under Mr. Ferranti's supervision, are gradually perfecting their system of electrical distribution.

Domestic circumstances cut short young Ferranti's school life, and he suddenly left Ramsgate to take a situation at Siemen's, the electrical establishment already named. He began modestly enough, with a salary of 20/- a week. But his progress was rapid. In the course of a few years he became an employer himself, and one of the foremost men in the newest industry of the day, and the chiefest industry of the near future, an industry which will employ as many men and women as the steam engine and gas industries now do—or rather, which will employ far more men and women, for the simple reason that the

COURTSHIP, MARRIAGE, AND LATER YEARS

world is growing more and more populous, and the dissemination of new inventions more and more strict. There are few employers who take so close and personal interest in the conduct and welfare of those in their service as Mr. Ferranti does. He is a stickler for respectful, gentlemanly behaviour on the part of his male employees towards the women and girls who are their co-workers. Nor has the cause of popular enlightenment a warmer friend than Mr. Ferranti. He believes in the wisdom of short hours, especially as a means, not only of efficient work, but also of intellectual recreation. In the new social conditions that are already upon us the workman must, thinks Mr. Ferranti, be no longer a machine, or the slave of one; he must be an educated craftsman, with heart and brain in his task. But a reasonably short working day is, says this captain of industry, one of the necessary conditions of the production of this kind of craftsman. Mr. Ferranti admires three things in a human being, whether prince or factory hand—namely, intelligence, moral character and devotion to duty.

Mr. Ferranti's is a tell-tale appearance. Fine talents sometimes exist beneath the most commonplace exterior. But there is something in Mr. Ferranti's appearance—in the large, dark, luminous eyes, well shaped head, mobile and firm mouth, strong chin, and well developed forehead—which suggests anything but a commonplace nature. The tone of the voice, too, and the quiet manner—to say nothing of the talk—are significant. To the above brief description of him I may add that he is of about middle height, erect, rather slim, pale complexion, thin featured, with dark hair, and dark strongly marked eyebrows. He is altogether a striking figure, to anybody with eyes to see. He is a hard student. He is constantly experimenting—an expensive business, in electrical work especially. Many an idea of his worked out in his quiet home at Hampstead is practically tested in his factory at Charterhouse Square. His engineering supervision over the great works at Deptford absorbs but a comparatively small part of his energies. The

SEBASTIAN ZIANI DE FERRANTI

Deptford electrical works, which are the largest of their kind in the world, are fitted up and planned after Mr. Ferranti's design.

My husband's first thoughts were always for the safety of the people working for him. I remember how upset he was when one of his men at work on the line was killed by a passing train. Many of the mains ran alongside the permanent way and it was anxious work laying them.

It is usually said that in engineering work accidents "must happen" occasionally. My husband did not take this view. He held that an accident is invariably due to a failure in some measure, either of the machine or of the men controlling it. The fire at the Grosvenor Gallery station had been caused through the carelessness of a lineman, or rather through his losing his nerve and failing to break the electric circuit by throwing a switch.

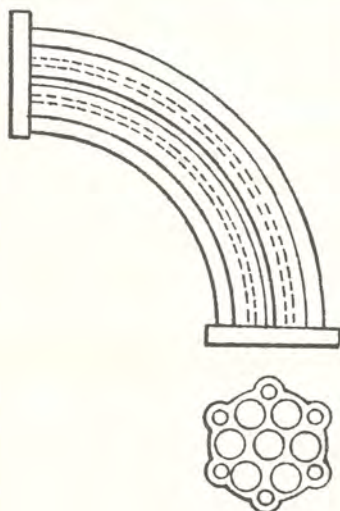
In February 1891 a steam pipe burst at Deptford and one of the men was killed. I remember the accident very vividly because Basti was so troubled about it. He immediately set to work to study the construction and manufacture of steam pipes. The accident at Deptford was similar to many that had occurred on land and sea. Marine engineers had for years been considering the dangers involved, and although many patents had been taken out, nothing satisfactory had come into the market. Basti at once saw where the danger lay and how it was to be avoided. During the few hours that elapsed between the failure of the main steam pipe at Deptford and the inquest that followed the accident he thought out all the details of his multiple pipe and soon afterwards secured the necessary patent rights.

It is surprising to think that where so many marine

COURTSHIP, MARRIAGE, AND LATER YEARS

engineers had failed he should have so swiftly and completely succeeded. The whole difficulty lay in the seeming impossibility of obtaining copper steam pipes that could be trusted to take the required strain. None of the methods which had been devised for strengthening copper pipes had proved to give absolute security.

Basti saw the urgent necessity of devising a steam



MULTIPLE STEAM PIPE INVENTED IN 1889

pipe which would take the necessary strain without danger of explosion. He came to the conclusion that at any cost the use of brazed pipes must be discontinued and solid-drawn copper pipes must be adopted. But he was faced with a difficulty. Up to this time the process of making solid-drawn copper pipes had not enabled coppersmiths to turn out pipes of anything like sufficient diameter. There seemed no way out of the dilemma until the simple device of bunching a

number of pipes together occurred to him. Having got so far another difficulty arose: how to fix the pipes into suitable flanges. Brazing would probably have to play an important part, and the risk of rupture or explosion would be multiplied by exactly the number of pipes used in the construction of the bunch. My husband therefore discarded any idea of brazing his pipes into the flanges, and adopted, after one or two experiments, the system finally used. All the pipes were expanded into the flanges, and single pipes were connected with as few flanges as possible. An article in the *Engineer* of March 13, 1891, on the Ferranti steam pipe concluded thus:

There is at Deptford one multiple pipe which delivers steam to a pair of 700 horse-power engines 130 feet away from the boilers with a loss of not more than 5 per cent of pressure, and better than this cannot be expected from any pipe single or multiple . . . The practical advantages are many and great, and a few of these advantages appear to us to be:

1. An enormously reduced probability of explosion, due to the very great increase in strength of the multiple over the single pipe, for the same area.
2. In the event of explosion, the absence of, or much minimized danger to life and property owing to the fact of the small flow of steam, by the failure of one small pipe, for we cannot regard the failure of more than one pipe as being at all probable.
3. The ease and certainty of obtaining tubes of a uniform thickness throughout; the increase in strength of solid drawn pipes due to the drawing operations, and the obtaining of copper of a definite standard condition.
4. The elimination of most of the objections to brazed pipes, as there will be no thinning of the metal at any point, no weakening due to over-heating, and no

COURTSHIP, MARRIAGE, AND LATER YEARS

drawing of molten spelter through the joint. Beyond this the serious danger of producing incipient flaws when planishing or scarfing the edges of the copper plate is entirely obviated.

5. The great increase in the flexibility of the bends, etc., and the consequent ease in making due and sufficient allowance for expansion and contraction. . . .

The whole of the work at Deptford has been done on the premises, and is, as we have said, a thoroughly satisfactory and workmanlike job in every respect. . . . Every length of pipe and all the bends have been tested when finished; but merely to prove the work, and never to more than twice the working pressure intended to be used. This is wise of Mr. Ferranti, for the whole tendency of the present age with engineers is to over-test. Boilers are as a rule much over-pressed by the hydraulic tests to which they are subjected; and steam pipes, water pipes, receivers etc., oftentimes receive a wholly unnecessary strain when tested, which leaves them in condition of efficiency much inferior to that in which they were before the tests were applied.

At this time Basti was doing a good deal of speaking and lecturing before scientific societies and institutions in different parts of the country. In these early days, though always an excellent speaker, he was very nervous and this told on his health. I remember when I had gone to stay for a few days with my parents in Sussex, Madame de Ferranti sent for me because he was ill. I returned to Town and took him home to Fellows Road. The doctor thought (as was very likely) he was overworked and advised rest. I believe that this was the first attack of appendicitis he had, although for years the doctors diagnosed it as liver trouble.

On October 27th I went with my sister-in-law to see Father Pius about being received into the Catholic Church. I made my first Holy Communion with my

husband at St. Dominic's Priory on November 9, 1890. As the church was some little distance from our house in Fellows Road we stayed the night at Madame de Ferranti's, which was about three minutes' walk from the church. Although Basti was never demonstrative about this, he was very happy I know when he felt that I had been received into the Church without any pressure being brought to bear by himself or his relatives. After all, I had been married one year and seven months and had been preparing myself and thinking about it all that time. I shall never forget the feeling of peace we both experienced after the ceremony and my first Holy Communion.

My Patron Saint's Day of that year proved unfortunate. For it was on St. Gertrude's Day (November 15th) that the great fire occurred at the Grosvenor Gallery distributing station. Basti was naturally terribly worried and upset. I knew that he would have to be down there for several days and nights, so I asked my mother if I could go over and stay with them at Chelsea and take the baby. And to Chelsea I went.

It was a trying time. For three months things were at a standstill. It was not until February of the following year that the supply of electricity could be recommenced. The *Electrician* gave an excellent account of the conditions at Deptford and the Grosvenor Gallery:

On Monday last the supply was recommenced from Deptford, after having been shut down for three months. At present the current is only between 4 p.m. and 2 a.m., as the distributing stations are not yet complete, and the engineers, who have thoroughly appreciated the facilities which the cessation of supply has afforded for carrying out the permanent work, naturally prefer to make good the constructive work without having 10,000 volts at their elbows. The present supply has shown that the London

COURTSHIP, MARRIAGE, AND LATER YEARS

Electric Supply Corporation still exists and their old customers are returning as fast as they can be dealt with. The first few were rather shy, each wanting to see how the other liked being connected to the new system with its enormous pressure; but finding that the lamps burnt steadily at their accustomed 100 volts, the others came in freely. It is hardly necessary to state that before starting, everything was tested on open circuit, the mains and transformers being subjected to 17,000 volts, and all the house connections and fuses being carefully overhauled. The overhead circuits have been entirely abandoned, and Siemens and Fowler-Waring concentric sheathed cables alone are used, the few lengths of ordinary cable previously in use have been drawn out and will be made into concentric cables. Mr. Ferranti is strongly opposed to the use of ordinary cables for anything over 200 volts, and instances the slight accident which occurred some months ago in Piccadilly, and which could not have occurred with a concentric cable.

While speaking of cables, I ought to mention here that Basti thought of a novel cable expansion joint, and I think it is interesting enough for it to form the subject of an illustration. This is shown facing p. 94, and is a facsimile of a page in one of Ferranti's early sketch-books.

The Ferranti cable had one of these expansion joints at every 20 feet, in which length the mains were made.

It is interesting to note from the Press of the period, viz. the *Electrical Review* of February 1891, that we had equipped many stations with alternators on the Continent, viz. La Plata, Argentine, Rosario, Barcelona, Spain; the Municipal Station, Paris; Nancy, Havre, Milan, Troyes, Nîmes, Dijon, Sens, and St. Cere. The *Electrical Review* pointed out that such was the con-

fidence in the Ferranti alternators that a few of the smaller stations were running with single machines, i.e. without reserve plant; their extensions being either in hand or in contemplation.

It is an extraordinary reflection on our British laxity that later on we had to give up making dynamos entirely owing to the keen competition from abroad, after having practically taught the foreign makers how to build the machines.

It was a very busy time for us both during the first months of 1891. Basti was constantly at Deptford and I had the baby to attend to. I remember taking Zoë to her first fancy dress dance at my parents' house on Chelsea Embankment, when she was six months old. She was dressed as Little Red Riding Hood and, being the first grandchild, was made a great fuss of. My husband was only able to get home at distant and uncertain intervals. Even on Sundays he could not get free to come with me to Mass at St. Dominic's. He used to hear Mass at the Italian Church at Hatton Garden. He had an office at Charterhouse Square at that time, and we got a peep of him in an interesting *History of Hatton Garden* by H. Marryat and Una Broadbent:

In 1884-5, Mr. (afterwards Dr.) Sebastian Z. de Ferranti, a youth of less than twenty years, fresh from college, was working in No. 57B perfecting his inventions and evolving those schemes which afterwards marked him as one of the greatest electrical engineers of his time. Here, in fact, the great concern—Ferranti, Ltd.—found its birth. Mr. George Hyde, the Hatton Garden engineer, who knew him well at that time, says he was a man who never lost his temper and was delightful to serve. He let nothing stand in the way of his accomplishment of any engineering objective he set himself.

COURTSHIP, MARRIAGE, AND LATER YEARS

His position in the electrical world, although he was only 27, was by this time well established. He had already become the foremost authority on electric lighting in Europe. The Ferranti alternators were being sent to all parts of the world, England, Scotland, America, and the Continent. The tables had been completely turned on those who had declared that, in forcing his high-pressure system of transmission on the public, he was trying to do what was highly dangerous if not impossible. His name was appearing more and more frequently in the electrical papers and even in the general Press. The *Electrical Engineer* wrote in a leading article on Deptford on March 20, 1891:

Is it not singular to find how completely the muggumps have alighted on the side of the fence in praise of Mr. Ferranti? It is not so very long ago since most technologists shook their heads and expressed doubts as to the possibility of this young engineer carrying out his promise. Rashness exemplified, speculation, utter failure, were terms frequently used in connection with the new departure. Here and there a voice was heard hoping Mr. Ferranti's plans would succeed, because he showed so great an amount of pluck and energy. A fire occurred—another fire—and jubilant enemies uttered the always-to-be-remembered "I told you so," but unfortunately for them, Mr. Ferranti's prophecies have proved correct, and his hitherto revilers are rapidly turning round with congratulations. . . ."

The writer goes on to deal with the fierce criticism to which the young engineer had been subjected:

Many unjust criticisms were hurled at his head, and not the least was the openly expressed opinions that his gigantic scheme was from the first an unsubstantial dream:—not thought out and against the teachings of science;

that in some peculiar manner he had got men of wealth to believe in him, and was spending huge sums of money in the most reckless and haphazard manner, all of which must surely be lost. What's the position of these critics to-day? They have done their worst. They have to a certain extent gained the ear of the public, and beaten down the quotation for the shares of the Company far below their real value. What is the present position of affairs? Mr. Ferranti tells us in his report, given in our last issue, also Mr. Forbes in his speech at the meeting of the Company, given elsewhere. The whole report and the whole speech show no indications of failure, but may, indeed, be said to be paeons of triumph. The mains have been laid, the engines and dynamos have been run, current under a pressure of 10,000 volts is being transmitted from Deptford to light some 10,000 lamps, and within three months the machinery will be ready to supply 90,000 lamps.

The severe strain to which he had been subjected told upon him and in April Basti was taken ill again with an attack of indigestion which lasted three or four days. This must, I think, have been a second attack of appendicitis, though less was known about the appendix then. It came at a very unfortunate time, for an injunction had been obtained in restraint of the company by Messrs. Savory and Moore and my husband had to attend as a witness. The fire at the Grosvenor Gallery had given this firm a bad scare and they were afraid lest their premises in Bond Street should be burnt down. It was the high-pressure system mainly that had given them a fright. That there was really no danger involved had been proved out and out, but prejudice dies hard.

Law reports usually find their way to the dustbin or into the legal textbooks—both excellent places for them. But a quotation from a report of this case is

justified since it throws light on the difficulties the pioneer has to encounter:

The Plaintiffs' case, in support of which considerable evidence was called, was that in consequence of the use of the high-pressure system, there was a great danger from fire at the defendants' distributing centre in the Grosvenor Mews where they received large supplies of electricity, sent to them from their generating station at Deptford. It was stated that a number of accidents have already occurred, and that there had been at least one serious fire on the Defendants' premises. The London Electric Supply Corporation retorted that when the accidents and fire occurred their property was only temporarily fitted up, and that now the chamber in which the electricity was received had been made entirely fire-proof, so that under no circumstances could a fire take place again. It was, said the Defendants, to their interest to make their distributing stations as safe as possible and they had used every endeavour to do so.

His Lordship, in the result, intimated his intention of allowing the action to stand over for three months, with a view to seeing whether the Defendants would take extra precautions to prevent any danger from fire or otherwise arising from the upper portions of their building. . . .

Domestic events were taking place at this time. I shall never forget the birth of my second baby. Everything had been so carefully arranged, the doctor and the nurse engaged, and all things made ready. And yet, at the last moment, everything went wrong. My sister Pat and a great friend, Helen Taylor, were staying with me. Madame de Ferranti invited the four of us to supper one evening and there was to be music afterwards. Some beautiful quartettes were played and we all enjoyed ourselves immensely. We left about eleven o'clock and all got into a four-wheeled cab. I

don't know what was the age of the horse, but he went in a curious Pickwickian sort of way, not seeming quite sure which was road and which pavement. I became perfectly convinced the cabby was drunk and told Basti so. Poor man, he was very worried, not thinking me in a fit condition to get out and walk, so he assured me the cabby was sober. But if the cabby was right, I felt sure the horse was wrong, for we continued to do the queerest zigzag along the road. When about ten minutes' walk from our house we struck the kerb with a bump. That finished it. I insisted on getting out and get out I did and walked home. But by the time I got there I was feeling very unwell. The baby was not expected for another three or four weeks. The doctor who was to attend me had gone on holiday and I had mislaid the address of the nurse. I could only remember the name of the road she lived in. So Basti set off and began knocking at the doors of all the houses in that street, trying to find the nurse. My sister and our friend were both, like myself, very young and they were dreadfully worried finding themselves left alone with me and not knowing what to do. The hours dragged on and Basti didn't return (poor man, he was still knocking all the people up in that street—it was a very long one). We could not send for my mother as she had a big dinner-party on that evening and I would not hear of her being disturbed. At last my sister had an inspiration. She remembered that a cousin of ours, Annie Liberty (a woman of wide experience and with a capital head in a crisis), lived in the neighbourhood. This cousin most kindly came round and most nobly looked after me until at about five o'clock in the morning my husband returned. He had found the nurse (she lived at the further end of the street from that at which he began knocking) and he had managed

to get a doctor. The baby (a boy) was born at nine o'clock in the morning.

There were great rejoicings to think that we had a son, but the unexpectedness of his arrival, and my distress at the time, were not conducive to his comfort and he was for some while a delicate baby. We were afraid, after two days, that we were going to lose him; the only thing to be done was to get a "wet nurse" to feed him. Various relatives were hunting for a suitable woman and in the end my parents found one at Queen Charlotte's Hospital. Both the baby and I began to improve very slowly. We were very fortunate in getting a nice woman and in the end having a fine, healthy baby. It is sad to think that his was one of the many lives lost in the Great War at the age of twenty-six. He was my first baby after I had been received into the Church and I was very anxious to get him baptized. It had to be delayed a little owing to his health. But on July 18th he was baptized by Father Reginald and given the names Basil Francis Sebastian. Long before, when we were engaged, on our walks about Hampstead Heath we used frequently to pass a school called "St. Basil's." Those were such happy days that the name somehow became associated with our walks and we made up our minds that if we ever had a son he should be called "Basil." Francis was in memory of my father, who had always been so good to Basti and myself, and Sebastian was after his father. Madame de Ferranti was his godmother and his uncle Wladziu his godfather. My first visit anywhere after the birth of my babies was always to church. That year I was churched at St. Dominic's on July 29th by Father Reginald.

In August of that year we took the two children and Clara, the nurse, down to Crowborough. My father

very kindly lent us a small cottage on his property. We had a very happy summer there, the two children, nurse and myself, and Basti whenever he could be with us. There was no electric light in cottages in those days, only candles and lamps. However, as it was summer time we had no need to bother much about lighting the lamps.

In 1892 Basti gave up his position as Engineer-in-Chief at Deptford. He had determined to build up a business of his own as manufacturing engineer. It was uphill work at first and much of his time was occupied in travelling about the country getting orders. There was little money coming in and it became essential to economize. We gave up our house in Fellows Road and the house we had taken for Madame de Ferranti in Park Road and she and her daughter Juliet and her granddaughter Wanda came to live with us in a smaller and cheaper house we rented in Tedworth Square, Chelsea. I was only able to keep one maid and the wet nurse. Everything had suddenly become very difficult and the future uncertain. In fact, I believe my father allowed us about £500 a year to live on, which we were able to pay back with interest in later years. I find a letter from Madame de Ferranti written to me on the anniversary of our wedding-day which calls to mind how very dark the clouds were at that time:

To-morrow will be the 4th anniversary of your and Basti's Wedding, so before I say anything more, let me offer you both my best congratulations, and wish you with all my heart a great many happy returns. Never mind the present clouds, with God's blessing they will pass away, and the bright sun of success will shine again. Only trust in Him, and be loving and true to each other, and things must come right in time . . .

COURTSHIP, MARRIAGE, AND LATER YEARS

Her faith was certainly justified, though unfortunately she did not live to see her son's complete success. How difficult circumstances were for us in 1890 and 1891 is clearly shown in the letters I received from my husband at this time while he was travelling in the Midlands. The Deptford company had failed financially and since my father had himself put money into it the position was very distressing for Basti.

The courage and determination to succeed which inspired him all through these troubles are fully revealed in the letters he wrote me.

On March 1, 1890, he left London for Leeds. While on the journey he wrote:

MY DEAREST GERTRUDE,

I am writing this in a third class Great Northern carriage (full of people) on my way to Leeds. I have just read your letter and must thank you, dearest, very much for it as it gives me hope and all possible determination to make the thing go. I nearly came down to you yesterday but missed the last train and so stopped at Chelsea instead. You may imagine how mad this made me, but I think it was for the best as I am sure Mr. Ince would have telegraphed for me to-day. I will now give you a bit of a history. I lunched with Mr. Ince on Monday and he did not much like the idea of Lord Wantage coming in as my partner. Indeed, I could see he very strongly disapproved of it. He seemed to think that if we were a Company he could find the money *easily*. Therefore when I saw my noble friend on Tuesday I did not feel a great interest in his joining me although I thought he would do so. He however told me he could *not* and thus ended my chances in that direction. When I again saw Mr. Ince he talked very differently to what he did on Monday at the Club. I saw him again yesterday (Wednesday) and he had got somewhat better. I stopped at Chelsea the night as I told you and we went to the City together this morning.

I told him how much I hated the idea of a Limited Company and how it would take all the interest out of my work. He however said it was sentimental and that it was the best thing to do and pressed it *very hard*.

I said that I would like to see first if some friends would lend *me* the money, and also that I would like to consult Mr. Cooke of Leeds, an old friend who is a large manufacturer, in fact, the largest printer in England and who rose without the assistance of a Limited Company from the humble position of a newspaper boy.

He however thought this was useless and so I gave it up and resigned myself to the idea of a Company for the sake of *peace*. I went to Deptford feeling *sick*, and Mr. Ince a little later went to see some regular financial friends to try and arrange matters. This afternoon he telephoned me to say that they would not *look at it* unless we gave them a very large share in the business. You see therefore that his Company business did not work with the financial people and he is therefore practically at his wit's end to know what to do. It is of course a most beastly time that I am having and I am no further forward up to now. So I cannot see any harm in taking a successful man's advice.

I am now travelling (in the first place) to Leeds to do as I explained and I shall then go to several people money hunting. Practically speaking *begging* them to help me. I do not fear their willingness to help but I fear their capacity to do so. I am however quite convinced that they would rather help me personally than give money to a Company.

We will soon see what they do or don't do. In the meantime do not forget to pray for me that I may succeed by some good means. The position is very serious as I am sure the thing is good and could be brought round with the necessary money. . . .

I hope you are not over anxious about affairs. After all, our happiness depends more on how much we love each other than anything else. . . .

COURTSHIP, MARRIAGE, AND LATER YEARS

He wrote to me again on March 19th. The difficulty of raising the necessary funds was still a heavy burden on his mind.

MY DEAREST GERTRUDE,

By the time you get this you will of course know that I was not able to come down to-day.

I have been very hard at it since I left you, with general business, and added to this has been the work of trying to arrange matters in order to mend the mess we are in.

I have been over the whole matter with Mr. Ince and he tells me that he has said nothing about it at home and asked if I had told you. The affair is of course worse for him than for me and as he sees no way out of it, it is really in my hands to get him (and myself) out of the trouble. I am of course hopeful although I have as yet no success. I shall of course have to work at the affair until I do succeed in some form or other and this may keep me in Town until Saturday.

I do wish it was over and that I could say we were out of trouble and that Mr. Ince's money was safe.

He would be only too glad if I could free him from his liability. Of course he would prefer to remain and make money if possible but anything would be more agreeable to him than the present state.

I hope the baby is all right and that you are not very dull. Ma and Judy send their best love.

Your ever very loving

BASTI.

Try not to bother about this. I am trying hard to make it go right.

On March 28th he was again travelling to Leeds, and in a letter of that date (written from Manchester) he tells of his hopes and fears and of a chance encounter in the train which encouraged him greatly to go forward:

SEBASTIAN ZIANI DE FERRANTI

I got to Leeds all right last night, the train arriving to within a minute of its time.

This morning I duly went to consult Mr. Cooke as I explained to you in my letter of yesterday. Unfortunately he was away from Leeds and would only be coming back at half-past one. I met him at the railway station but as my train left at two o'clock I had very little time to speak with him and in consequence he could not give me much advice which of course I regret. He however said that I was much better known in his part of the world than I had any idea of and that if I wanted it, he would help me in any way he could.

After a hard run for my train I just managed to catch it, feeling very dull and doubtful. There were three men in the carriage into which I got and the one opposite me, who looked of the military species, seemed pleasant and communicative. He began talking: "It's no use concealing it, the newspapers have it now—" and then he went on to explain how, after a hard contest, he had been appointed Head Constable of the town of Leeds at a salary of £500 per annum. He had had to fight very hard for it and had been very anxious and so was all the more delighted to succeed in getting the position.

As I was interested in him he told me all about himself and talked all the way to Manchester; amongst other things saying how pleased his wife would be and that he had already telegraphed her about his good luck.

You may wonder why I write you about all this but it did me good to hear of anyone succeeding after having a hard time of it, and I therefore went to Hick Hargreaves on my begging errand in much better spirits than I should otherwise have done.

I only saw Mr. Inglis as Mr. Hargreaves was away and he alone could not give me a definite answer but he said that he would recommend him to lend me the money I wanted (£10,000).

Of course something may prevent this, still I earnestly hope it may come off all right. I am going on a similar

COURTSHIP, MARRIAGE, AND LATER YEARS

errand to Mr. Bolton to-morrow. I do so wish I could get all this unpleasant business settled as it is very worrying.

If I can only get it right it will be a great relief and having the Works all my own and involving no one else in difficulties will be too pleasant to contemplate. You can hardly tell, dearest, how your belief in me that I can make things go has helped me in this troublesome time.

If I *can* manage I shall want all the help you can give me to make success certain. I shall wire you to-morrow how I am going on, but hope to be with you in the evening.

Now, good-bye, my dearest wife, with fondest love
From your ever loving

BASTI.

The difficulty of raising the money to float a new company was not easily resolved. Most of that year and the greater part of 1891 my husband spent in visits to engineers in Leeds, Manchester, and Glasgow. This task was rendered hateful to him not only by reason of his sensitive nature, but because it prevented him from pursuing his proper work of inventing and constructing.

On October 30, 1891, he wrote to me from the North Western Hotel, Liverpool:

DEAREST GERTRUDE,

I left town on Wednesday at 9.15 only, as I could not manage to catch an earlier train; and arrived at Derby at about one o'clock at night.

The result was that I was only down at nine the next morning and found that my first train for Bolton's left at eleven, getting me there at one, just in time for lunch.

Mr. Bolton and one of his sons met me at the station. I spent the afternoon with them at the Works and in the evening explained my business to Mr. Bolton.

He as usual was very nice and sympathized with me in the difficulty of the position. He promised to help us if

SEBASTIAN ZIANI DE FERRANTI

his partners were willing. I am a little afraid about this help as they have been spending so much money lately on their own Works that they cannot have much to spare. He, however, seemed very desirous to help us, so that I think it is probable that they will.

I spent the night there and left at one o'clock to-day after having been driven over to their new Works at the next station, which they wanted to show me. This afternoon I went to Hick Hargreaves and found Mr. Hargreaves away from the Works with a cold.

I however saw the manager and went over the Works with him after which I drove out to Mr. H.'s house. He was very pleasant and I feel sure will do all we want. I then came on here and have just had supper.

I hope that you are getting on all right and that the children are well. I shall wire you to-morrow what I am going to do. It is not likely that I can get back before Thursday. Good-bye, my dearest Gertrude. Best love

From your ever loving

BASTI.

On Sunday, November 1st, he was in Liverpool and went to High Mass at the church he had attended as a boy. The financial prospect was rather brighter:

I think that I will be able to get the £20,000 with a little work and it will enable us to go ahead as we should do. . . .

As Mass was over by about midday I went for a walk to the landing stage and had a look at the river and the ships but it was too foggy on the water to see much.

It seems so very strange to go quietly over all the old places again. They have changed very little. It seems a sort of dream to see them all again.

As I cannot see Mr. Leslie here before Tuesday I am going to Leeds to-morrow and shall not leave here for Scotland before Tuesday night.

I shall, of course, come home as soon as I can and let you know what I am doing and when I am coming. . . .

COURTSHIP, MARRIAGE, AND LATER YEARS

The wheel of fortune was beginning to move in the right direction, as is apparent from a much happier letter he wrote me from Glasgow on November 3rd:

MY DEAREST GERTRUDE,

I was very glad to get your letter this morning. . . . I wired Mr. Ince this afternoon telling him a little of the position.

The principal difficulty about the money question is the time it takes. I am very much afraid of frightening people off, which would be a pity. Most of them want to think it over a bit which is not unnatural. Both Atherton and Leslie, the solicitor in Liverpool, will be able to place some of our shares but as the Wire company is coming out this week they are rather full up. I am however to see them again on Friday and Saturday in Liverpool when I expect that I shall get them up to what I want. I have still to see Stuart and Shanks here, Cooke in Leeds and Baldwin in Birmingham. So you see that I have plenty to do. I also expect to have to see Hick Hargreaves again.

I am going to be at Atherton's on Friday and Saturday as there is going to be an important Board of the Company on Friday when I hope to get an order for a dynamo for about £500, and some money in part payment of our patents.

Yesterday I went to Sheffield with Atherton to see the Electric Light and Telephone Company there. After talking to the manager for about four hours solidly (most of which had to be done by me, being technical) we came away with an order for about £1000 worth of cable, just something for the new Company to start with. He is not satisfied with his Brush machinery (dynamos and engines) and I am pretty sure that he will come to us as he says our system is better worked out and more finished. He will have to decide to buy more dynamos in about three weeks before which time I shall see him again. Although it took a day I thought it worth going, as it means business

for us and will make the Directors of the Wire Company easier to deal with on Friday.

The whole point about our Company seems to be a question of devoting enough time to the getting of the money. No one seems to be surprised that we want it, on the contrary, they wonder how we have managed with what we have got . . .

I expect to be back on Saturday night. It is wretched being away so long; it seems a sort of exile but there is no help for it, matters are too pressing. I do not think that I have ever been away from you for so long before, since we have been married. . . .

I am afraid that this letter is very technical, but I have not much else to write about, and besides, I know how it interests you. I am glad that *you* have kept Mr. Ince informed. I am afraid that he will think me very long over the business but I am afraid of spoiling it by seeming over anxious . . .

Now, my dearest Gertrude, good-bye, with ever so much love from your ever loving

BASTI.

And he adds a postscript referring to a mysterious £5—possibly a loan—for money was very scarce with us at that time:

I shall probably leave here Thursday morning. I got Mr. Ince's letter with £5 all right this morning. It will be quite a great affair coming home again after so long, especially if I have been fairly successful.

During this difficult time it was nice to be near my father and mother at Chelsea, and my sisters were very kind in coming to help me with the children. But Chelsea seemed very dark and foggy after the clear heights of Hampstead. My principal recollection of those days in Chelsea is of fogs, and fogs, and fogs. They would begin a ghostly white and then turn to a

reddish yellow or sometimes pitch darkness would descend at midday. Our house was lighted by gas and the fumes of gas seemed to pervade the place from basement to roof. I cooked most of the children's food myself on a gas-ring. There was a grate in the cellar-kitchen, but it only heated the bath-water when the flues were kept clean. And the cook never seemed able to keep them clean. Little did I dream at that time I should one day have an all-electric home. There is no doubt that my two eldest children (they were ill more or less all the time we were at Chelsea) were much affected by their surroundings. I think we spent more on doctors' bills there than in any succeeding years.

Things in that house seemed to be continually going wrong. Everything that could leak did leak. The boiler at the back of the kitchen grate was very old. It had an unsuspected crack and this crack grew larger. One morning, when I went down into the kitchen to light the gas-ring, I found to my horror the whole place covered in water up to my knees. The cook-general (old-fashioned but she meant well) was wading about in the flood like Alice in the pool of tears. "Oh dear," I said, "your feet *will* get wet." But she went on wading to and fro and replied very cheerfully: "It's all right, Mum, I put the master's boots on."

Christmas of 1891 was memorable for one thing, and one thing only: Fog. The fog was so thick we had to keep the gas burning for the whole of Christmas week. Perhaps it was not surprising that I had both the children in bed with bad colds. What with gas, sick babies, and cracked boilers at home and in the City people who assured him that he was bound to fail, Basti had a trying time. On all sides people were shaking their heads at him and doubting the possibility of his carrying out his promises. Many unjust criticisms

were hurled at his head. They said that his gigantic scheme was from the first an unsubstantial dream—not thought out and against the teachings of science; that in some peculiar manner he had got men of wealth to believe in him, and that he was spending huge sums of money in the most reckless and haphazard manner, all of which must surely be lost. He used to laugh at all the criticism that went on and to tell me the ridiculous things people said. He never doubted for a moment that success would come to him in the end.

My third child and second son (who is now the head of Ferranti Limited) was born at Tedworth Square on February 16, 1893. He came into the world at the time when our fortunes were at the lowest ebb. He was not over-strong, and I put down most of his ailments at that time to the atmosphere of gas and fog in which he lived. He was certainly very welcome. We were delighted to have a second son and he was the only child out of the seven that I was able to nurse myself. Many people have said that he is more like me than any of the family in character. I think they mean that he is full of energy and knows his own mind.

Basti was very keen in getting us all away from Chelsea, and the house with the cracked boiler and the fumes of gas. But money was scarce. After much hunting about he found rooms for us at Littlehampton over a baker's shop. I think that holiday stands out in my mind more vividly than any other I had with the children. It was such a relief to get away from the fogs of Chelsea to the fresh sea air. Our rooms were primitive, but we had escaped from gas and fogs, and my husband was able to get down to us for the week-ends.

COURTSHIP, MARRIAGE, AND LATER YEARS

In April 1892 he had to go to Cologne on business. His anxieties were by no means at an end but he was greatly encouraged by the many offers of assistance he had received. He wrote to me just before leaving:

MY DEAREST GERTRUDE,

I am leaving to-night for Cologne which place I expect to reach by 1.30 to-morrow afternoon. I am to meet Atherton this evening and we are of course to travel together. . . .

Mr. Ince is in a very unhappy state about this business and things generally and has at last made a definite proposition about getting out of it. He is, however, under the impression that he has put a great deal more money into it than he really ever has but this does not matter much only it is so strange. Altogether it has made me very miserable and I wish the whole affair were at an end. Still, it may be for the best and who can tell but that we may make it all right in time. Best love to Zoë and baby and your dear self from

Your ever loving

BASTI.

By 1894 business prospects were looking brighter. We took over my brother-in-law's little house at Ashchurch Grove as he was getting married again and wished to live at Putney.

Although our financial circumstances were so difficult, the name of Ferranti had obtained such prominence in the scientific world that Basti's advice was sought from many unexpected quarters. Mr. Stetson, of the Niagara Falls Power Company, and Professor Riedler, had got in touch with him as early as September 1890. And rumours got abroad to the effect that "Ferranti has a scheme for utilizing the water-power of Niagara, on the Canadian side of the Falls."

In 1894 Basti was greatly encouraged by his success in securing an order for a 1,000-kw. alternator giving 100 amperes at 11,000 volts, and giving altogether an electrical efficiency of 97 per cent. Tenders for this alternator had been invited from the leading manufacturers in England, Germany, and America. But the true turn in the tide of our affairs came with the lighting of Portsmouth.

The Electric Lighting Committee appointed by the Town Council of Portsmouth had found it difficult to decide on what course to adopt. At first the idea of the Committee was that a low-tension system would be best. They visited Bradford, where an installation on this principle had been carried out by Mr. Shoobred. They decided to seek Mr. Shoobred's advice, and he drew up a scheme for lighting the principal portions of the borough with low-tension mains at an estimated cost of £56,500. While matters were being arranged and terms settled, however, a stranger appeared on the scene and expressed his positive opinion that if the proposed scheme were adopted the amount of copper required for the cables would be so heavy that it would lead to nothing but disaster. The stranger's name was Sebastian Z. de Ferranti and since his achievements were already well known, his observations caused the Committee to pause and consider. They held a special meeting at which it was decided to consult Professor Garnett, one of the highest authorities. Acting on his advice the Committee finally determined to abandon all thought of low-tension, and asked Mr. Shoobred to undertake a high-tension scheme as being better suited to the requirements of a large and scattered area. Mr. Shoobred declined and the matter was reported to the Council. The result was that a recommendation was

COURTSHIP, MARRIAGE, AND LATER YEARS

made that Professor Garnett be asked to prepare a scheme and that he be appointed to direct the work. This proposal was carried by a single vote. Plans and specifications were then got out and tenders advertised for. Messrs. S. Z. de Ferranti Ltd., of London, sent in a tender in accordance with the specifications, and also an alternative tender for a different class of machinery which struck the Committee as being mechanically perfect, and although it was, up to that time, untried, they determined to adopt it. The three principal departures from precedent were:

1. The dynamos were mounted on the flywheel of the engines and ran at a low speed of 96 revolutions per minute.
2. The arc lighting was done by means of continuous current obtained from the alternating current by means of rectifiers.
3. The current was distributed by means of automatic change-over converters which enabled a very high efficiency to be obtained.

Naturally, the chief events of the year 1894 are connected in my memory with the Portsmouth Power Station; one of the first of its kind in England, I believe. Basti did practically the whole work of designing and erecting the plant for this station.

On March 20th he took me, the three children, and the nurse down to Southsea, where we had engaged rooms. We were there until June 22nd.

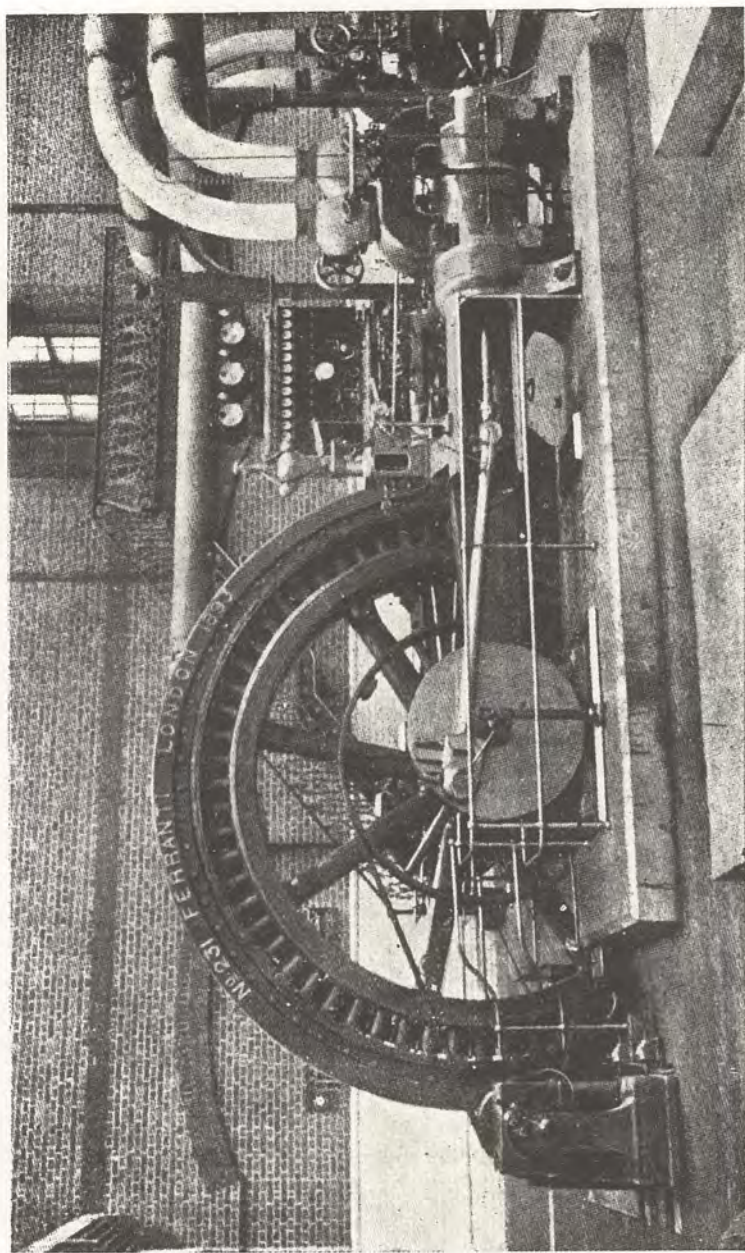
I think the power station at Portsmouth was the most interesting one we put down in those early days. Partly, no doubt, because practically all our staff from Charterhouse Square were working on it, so we were a circle of friends. It was all pioneer work and consequently we got many excitements.

We had four or five of our staff working down there with my husband all the time. Mr. Kolle joined us in the rooms we had taken and his excellent work at the Portsmouth station was most ably and kindly supplemented by the help he gave us with the children. Basil, aged three, was dreadfully slow in getting down his food and many a time Mr. Kolle, although he had only an hour for lunch, would patiently feed him while I attended to the baby. Zoë, the eldest (I'm afraid rather spoilt) would frequently have to be stood in the corner—from which she howled lustily. But Mr. Kolle was never in the least out of temper and quietly and kindly came to the rescue. I have always thought it so wonderful that an unmarried man, coming into the midst of a family of noisy young children, should have been so kind and so thoughtful as he was and never in the smallest degree ruffled.

The staff, with Basti and Mr. Kolle, used to work every evening at the power station until midnight. My great pleasure was, after I had put the children safely to bed, to go down to the station and, sitting on an empty barrel, watch them all at work. As things progressed and the machinery was being tried, I remember Mr. Kolle teaching me to take the readings.

While speaking of Mr. Kolle I should like to recall that he joined Ferranti's works in 1882, and was manager at Eastbourne for the Hammond Company from November 1885 until April 1888. He joined Dr. Ferranti again in 1888, and was with him until 1895, when he joined the Babcock & Wilcox Company. He very kindly, on the death of my husband in 1930, joined the Board of Ferranti, Ltd., and has always been so kind and helpful in looking after affairs for me.

Everybody at the station was working at high pres-



FERRANTI ALTERNATOR AT PORTSMOUTH

Particulars of A/c
with Sir C. L. Ld.

Order for A/c
Sept 10th 1885.

(1)	Number	Light	Price	Total
	9	— 25	— 7-10	£ 67-10
(2)	8	— 50	— 10-10	£ 84-0
(3)	13	— 100	— 19-0	247-0
				<u>Total £ 398-10</u>

Two payments of £ 169-17-9
less 5%

sure. There was little enough time for rest; none for recreation. But on Sundays Basti insisted that we should all stop work. He and I used to go to early Mass and after that we hired a sailing-boat and all the staff joined us for a sail on the Solent. We would land at Cowes, Ryde, or one of the towns in the Isle of Wight and return home in the evening. I know we all looked forward to those Sunday expeditions. One Sunday we landed at Bembridge and had lunch at the hotel. There was a piano in the place and after our meal I started to play popular songs. They all joined in and whilst we were enjoying ourselves the proprietor came with a very long face and said as it was Sunday would we mind not playing popular songs? Mr. Kolle was very polite and asked if he would mind letting us have a hymn-book as nobody could object to hymns on Sunday. To this the proprietor agreed and went in search of the hymn-book. But he soon returned looking even more troubled. "I'm very sorry," he said, "but we—well, the truth is, we haven't got one." Sundays were certainly observed more strictly in those days, but I'm afraid the supply of hymn-books even then was very inadequate.

Early in June Madame de Ferranti and her little granddaughter Wanda came down to us to attend the opening of the station which was to take place on June 8th. Mr. and Mrs. Charles Sparks also came and we were soon quite a large party.

On the day of the opening Basti was out very early. A number of distinguished electrical engineers were coming from London by special train. They were to be met by the Mayor and chief officials of Portsmouth at the railway station. It is hard to realize now, when electric light has become a commonplace, what a great event the opening of a new power station was.