

The life, character & writings of Benjamin Bell, F.R.C.S.E., F.R.S.E., author of "A system of surgery", and other works / by his grandson Benjamin Bell.

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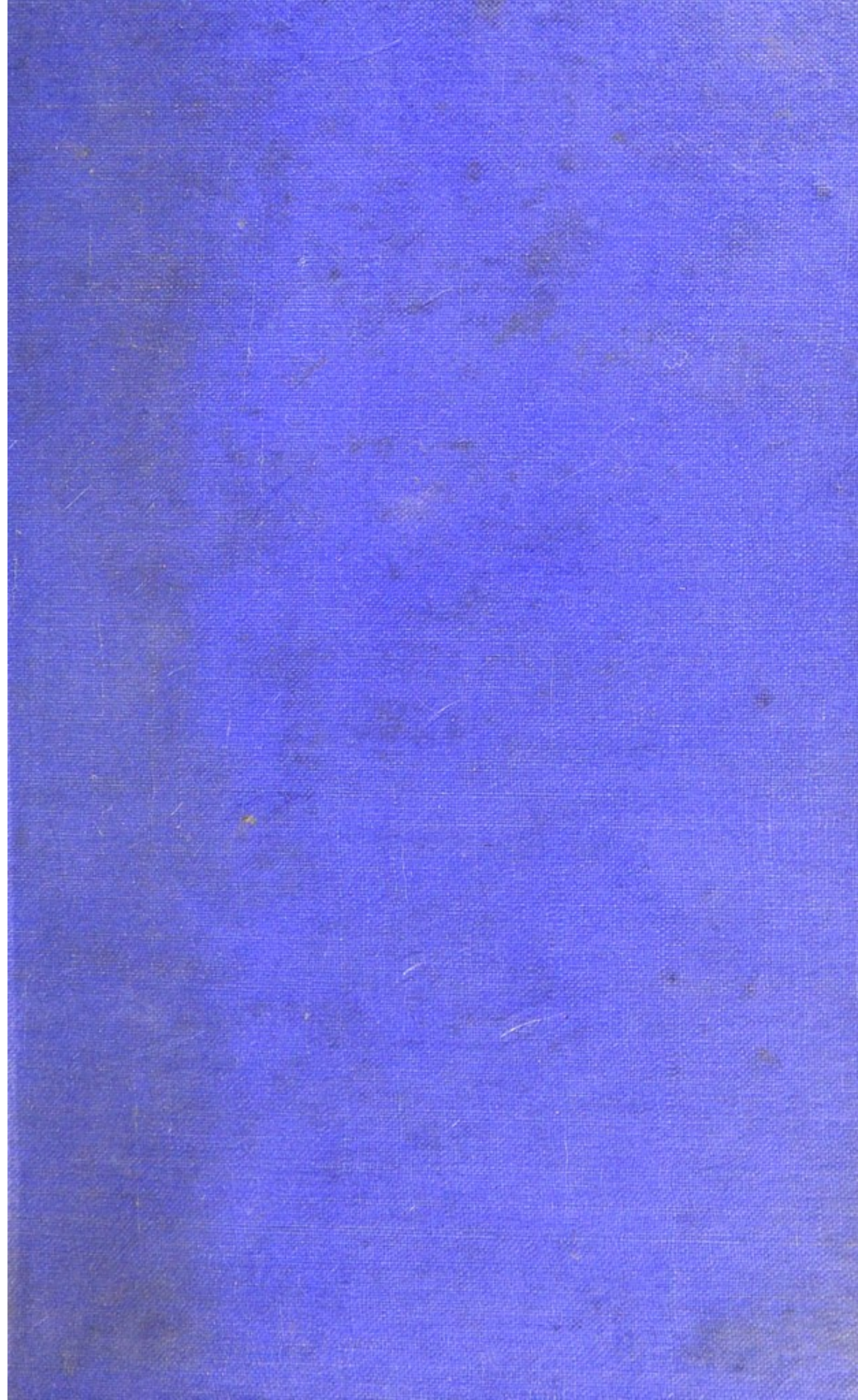
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THE LIFE
CHARACTER AND WRITINGS OF
BENJAMIN BELL

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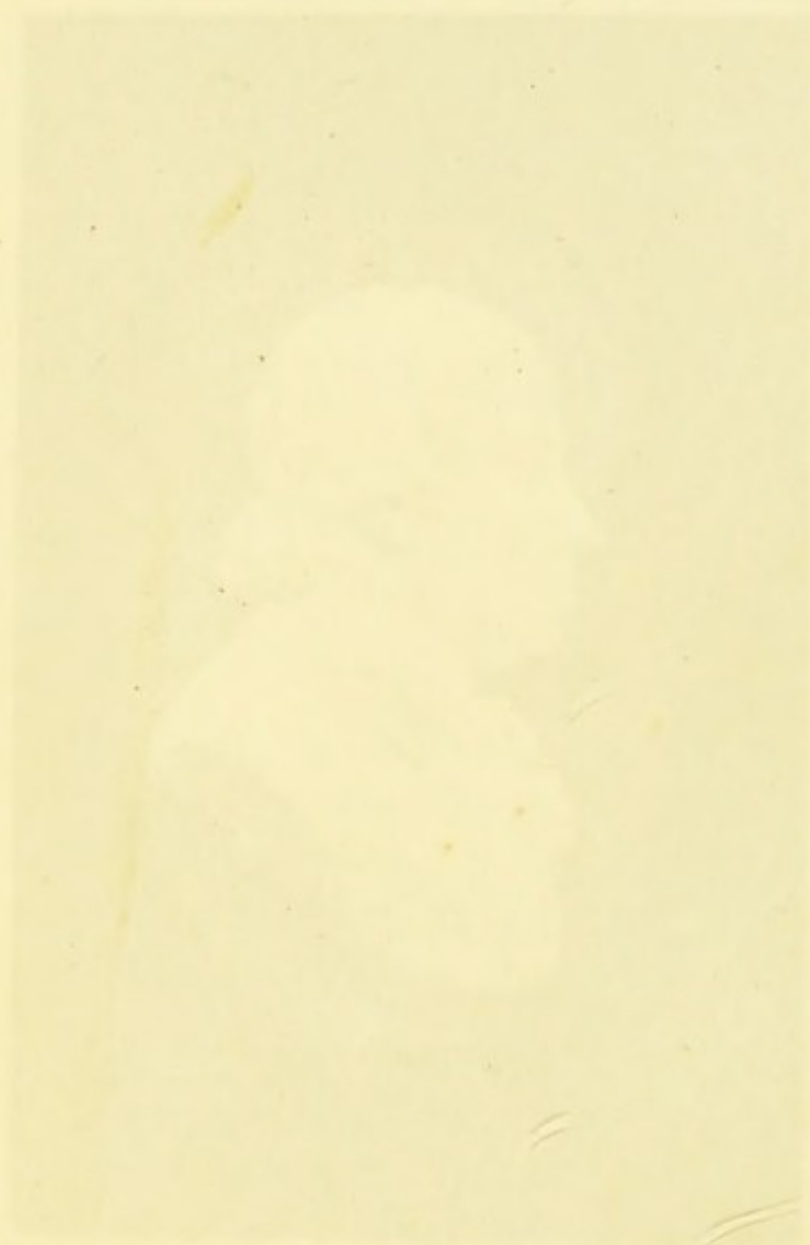
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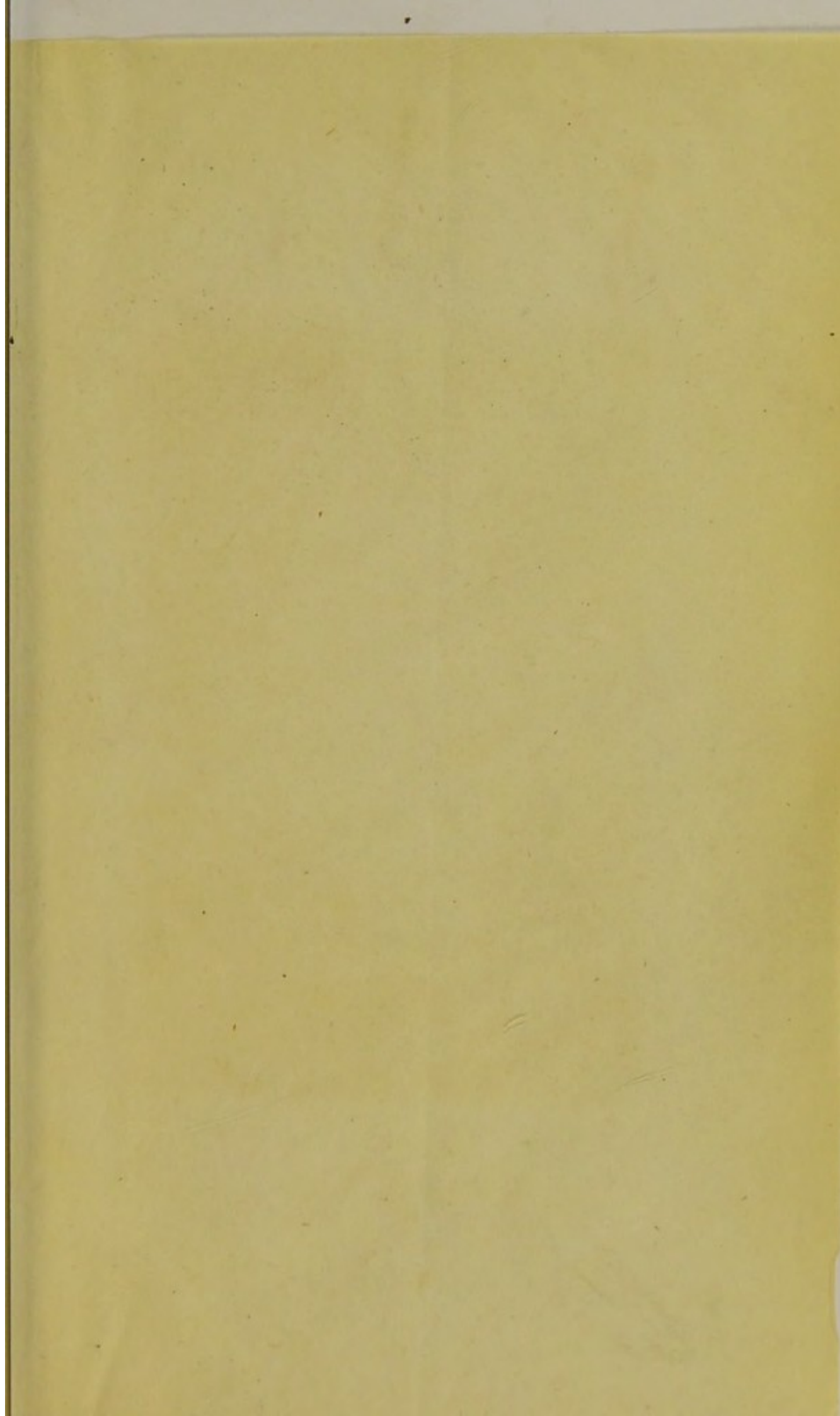
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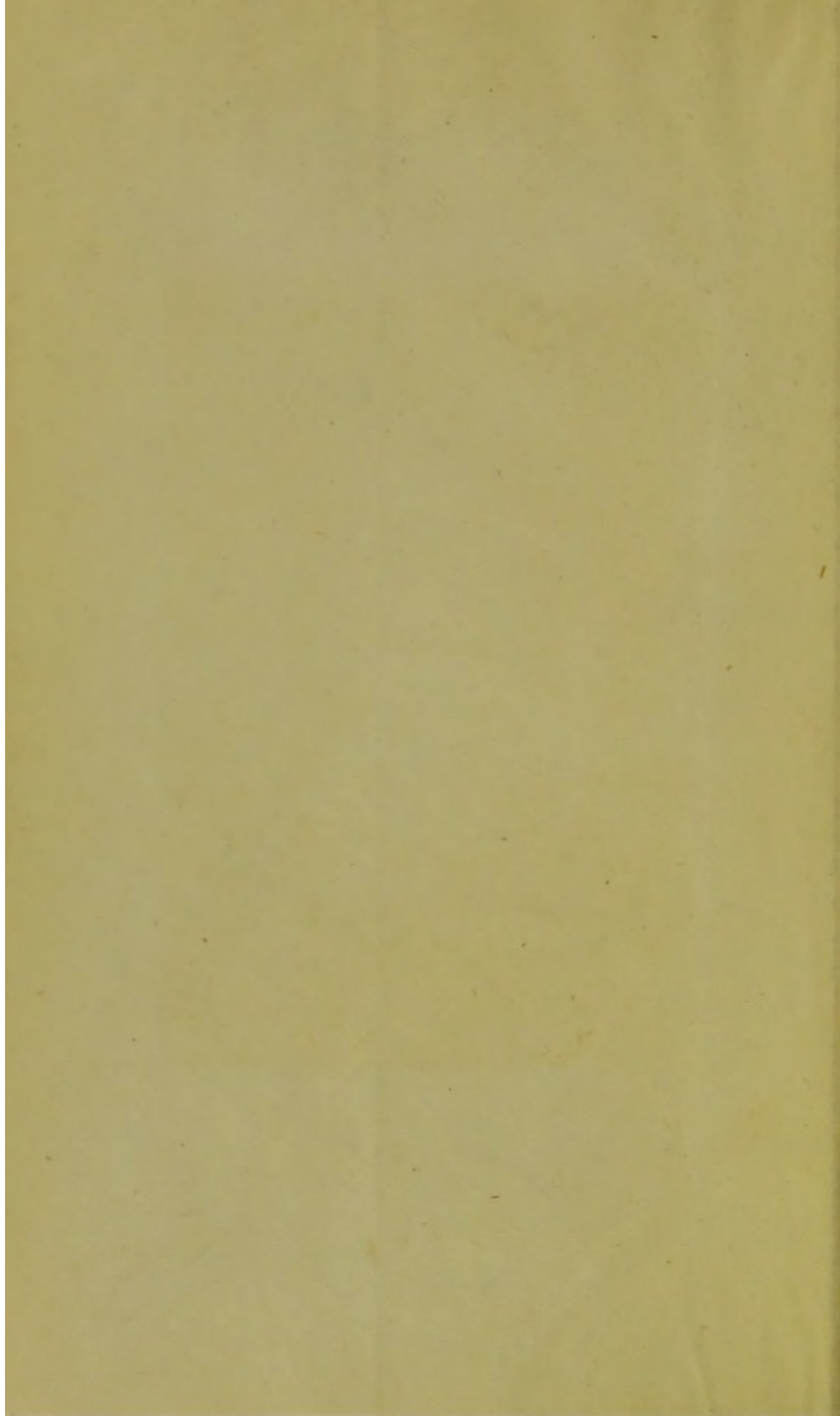
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THE LIFE
CHARACTER & WRITINGS

OF

BENJAMIN BELL

F.R.C.S.E., F.R.S.E.

AUTHOR OF A 'SYSTEM OF SURGERY,' AND OTHER WORKS

BY HIS GRANDSON

BENJAMIN BELL, F.R.C.S.E.

NON-PROFESSORIAL EXAMINER IN MEDICINE IN THE UNIVERSITY

EDINBURGH
EDMONSTON AND DOUGLAS

1868

THE NEW

AMERICAN

REVIEW

OF

THE

AMERICAN

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OF

THE

REVIEW

PREFACE.

THE following Memoir of my grandfather may appear to be uncalled for at this late period, so many years after his decease. This was my own opinion, in opposition to that of not a few friends, who on various occasions have urged me to undertake the task. The available materials were scanty, and that was another reason for leaving things as they were. About a year ago, however, a series of letters addressed by Benjamin Bell to his father and mother was discovered, carefully docqueted and arranged, in a repository at Woodhouselees, where the old people lived and died. These documents were kindly placed at my disposal by James Bell, Esq., of Liverpool, to whom they belonged. They commence in 1767, and terminate in 1793, thus extending over quarter of a century. They are eighty-two in number,

but the great majority refer to the earlier years of the period. They are mainly occupied with family concerns, and therefore do not admit of being largely quoted; but the information supplied is reliable, and our acquaintance with the character and dispositions of the writer is rendered full and satisfactory.

The additional sources of information, so far as published documents are concerned, have been a short sketch in Kay's *Edinburgh Portraits*, an article in Chambers' *Lives of Distinguished Scotchmen*, and a notice in Anderson's *Scottish Nation*. These are good, and generally correct, so far as they go. The only remaining sources upon which I depend are family traditions and the testimony of friends who knew and admired him.

A review and estimate of Mr. Bell's professional writings—not intended for the general reader—is reserved for an appendix.

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CHAPTER I.

THE subject of the following memoir was born in 1749, in the town of Dumfries, his progenitors having been proprietors in that county from the beginning of the fifteenth century, and leaders of the clan Bell in the old Border times. The family estates were designated Godsbrig and Blackethouse, both in the parish of Middlebie.

George Bell, Benjamin's great-grandfather, was a Covenanter and a so-called rebel. He was included in the Act of Indemnity in 1662; but his pardon was qualified by the imposition of a fine of £1000 Scots,—a large sum in those days; and this, along with other circumstances, may have led to the sale of the family properties by his son William Bell, who had been served heir to him in 1694. A younger son, Benjamin, had, since the time of the Union, occupied the farm of Woodhouselees in Canobie parish, belonging to the Duke of Buccleuch, and other farms, and towards the middle of

last century had been so successful as a rearer of stock, as to be able to purchase back the home-farm of Blackethouse, with its picturesque old tower on the banks of the Kirtle, and the adjacent lands of Cushathill.

This gentleman married Rebecca Graham, of the family of Breckon Hill, Cumberland, and had, besides other children, a son, George, who was born in 1722. *He* was the father of Benjamin Bell, of whom we are about to write, and it may therefore be proper to give some account of him, before introducing his more eminent son.

Early in life he seems to have been engaged in the Levant trade; probably without much success, because he afterwards entered into business in the town of Dumfries, and failed. Various anecdotes and family traditions regarding George Bell convey the impression that, with many excellent qualities both of the head and heart, he was rather deficient in some others which usually accompany worldly success and give weight to the individual among his contemporaries. Through life he was fond of playing practical jokes, and had a tendency to trickery and frolic, which was perhaps brought into broader relief than it would other-

wise have been by the more sedate and dignified character of his son.

Two instances may be cited: During the time of the rebellion in 1745, when he was still a youth, a favourite horse had been carried off by the Highlanders, probably on their southward march, as they passed through the parish of Canobie, by the farm of Woodhouselees, on their way to Carlisle. In the spirit of his Border ancestors, Mr. Bell devised the following scheme for recovering the animal:—Making his way to the rebel head-quarters, he announced himself as a zealous friend of Prince Charles Edward, and declared that it was in his power to do the cause essential service. The only conditions were secrecy and the immediate use of the best horse in the Prince's stable. Being taken at his word, he was allowed to choose for himself; it is scarcely necessary to add that the horse and his rightful owner soon found themselves on the Scotch side of the Border. Upon another occasion he is reported to have sent to a lady friend, residing many miles off, several live specimens of what he called anchovies; they were minnows from the Esk in a glass bottle. Although the night was bitterly cold, the trustworthy and conscientious messenger

was strictly enjoined, during his long ride, to hold the bottle at arm's length from his body, in case the foreign fish should be injured by too high a temperature.

Notwithstanding these peculiarities, he was a useful and respected member of society, and spent a long life, after his father's death, at Woodhouselees, carrying out those improvements in agriculture¹ and in the rearing of live stock, which, in the hands of two succeeding generations, have made the farm famous in that part of the country. He married, about 1745, Anne Corrie, daughter of James Corrie, Esq. of Speddoch in Dumfriesshire. This lady was the partner of his life during the vicissitudes of nearly seventy years, and survived him. She was the mother of fifteen children—the second in the family, and the eldest son, being *Benjamin*, the subject of this memoir. Mrs. Bell was a woman of decided individuality of character, and remarkable, during a period of comparative coldness and indifference, for the fervour of her piety. She was calm and placid in temper, admirably adapted to her husband, whose natural tendencies were in the opposite direction; and

¹ He had the merit of introducing the cultivation of turnips and clover into the district.

it can hardly be doubted that she exercised a very favourable influence upon the numerous offspring by whom she was surrounded.¹ There is an excellent portrait of the old lady, painted by Sir Henry Raeburn when she was nearly ninety years old—a pleasant intelligent countenance, which in early life must have been handsome, and now seems radiant with the serenity of a well-spent life drawing to its close. The companion picture of her husband is a copy, by the same distinguished artist, from one painted by Martin, Raeburn's master, at a period considerably earlier. He appears as a healthy, genial old gentleman of sixty-five or seventy, with a large supply of pure white hair, dressed in a blue coat and light-coloured vest, and twirling his thumbs. The expression is shrewd, light-hearted, waggish, and evidently quite characteristic. It may be mentioned as a curious fact, that when Raeburn was requested to make a copy of Martin's picture, he confidently main-

¹ Mrs. Bell seems to have inherited, so to speak, the earnest piety of her great-grandfather, Alexander Gordon of Earls-toun, long a prisoner in "The Bass" and elsewhere, for his adherence to the Covenant, and also of his wife, Janet Hamilton, who shared his sufferings; she was daughter of Sir Thomas Hamilton of Preston, a zealous Covenanter, who proved his loyalty at Dunbar and Worcester.

tained that he had been himself the author of the original, and only confessed his mistake, and that reluctantly, when indisputable proof had been adduced. The probable explanation of the circumstance seems to be, that the countenance only, perhaps the hands too, had been painted by Martin, while his promising pupil had filled in the remainder.

Mr. Bell died at Woodhouselees in 1813, at the age of ninety-one; his wife survived him for several years.

The rural scene, in which this venerable pair spent so many years, possesses much natural beauty; and, as already hinted, Mr. Bell and his descendants have added greatly to its amenity by reclaiming numerous acres of moorland, which, a hundred years ago, were quite unprofitable, but now exhibit, under an advanced husbandry, luxuriant crops, well-kept roads, trim hedgerows, and flourishing plantations. Their residence, enlarged and modernised, stands on an eminence within a mile of the English border, and commands a picturesque view of the open space where the river Esk, having emerged from the winding valley with its holms and wooded slopes, betwixt Langholm and the village of Canobie, is joined by

the Liddel, before passing the Roman camp, Netherby, and Longtown, on its way to the Solway Firth. A few natural objects still remain, which are closely associated with Mr. George Bell; such as a fine ash-tree behind the house, planted under his eye by a farm-servant, Sanders Ashcroft, who lingered into extreme old age, and is dimly remembered as one of the notables of our boyhood; the well-stocked orchard and garden, sloping downwards in front to the turnpike-road; and a stately poplar, which, when a sapling, received an awkward bend—still very conspicuous—from being the perch of a parrot sent home from foreign parts by a favourite son.

Before leaving him, we may mention that George Bell had two brothers and three sisters; and that the eldest of the latter was married to Mr. John Mowat, a surgeon in Longtown, an English village about four miles distant. This gentleman's father, also a surgeon, deserves to be noticed as a remarkable example of longevity. He was born in 1660, and died in 1776 at the age of 116. In the work on "Human Longevity," by Mr. James Easton, a Mr. Moval, surgeon at Langholm, shire of Dumfries, in Scotland, is mentioned as having died in 1776

at the age of 136. This evidently refers to Mr. Mowat; but his granddaughters believed that 116 was his true age. Unfortunately, the inscription on his tombstone at Langholm cannot now be deciphered.

It is said on good authority that he performed the operation of lithotomy after completing his hundredth year; and that some years later, while going to visit professionally his friend, Dr. Graham of Netherby, he fell upon the Esk, which was frozen, and broke his thigh-bone, but recovered from the accident so thoroughly as to be again able for his occupations as a country surgeon. He did good service to the people of Langholm, at the crisis already referred to, when the rebels passed through the village on their retreat from England. Being a Highlander by birth, he spoke to his rude countrymen in their native tongue when they were threatening mischief, and got them persuaded to pass on without setting fire to the place, or inflicting other atrocities. The worthy old surgeon's tartan dressing-gown, which he wore on the occasion, is still preserved as an heir-loom by some of his relatives in the neighbourhood.

Another human glimpse of these old times,

and we are done. Mr. George Bell's second sister, Rebecca, was married to Mr. John Meard, an Englishman, and a captain in the Duke of Cumberland's army. The public road passed in those days (1745) close under the windows of the farm-house, and the ladies of the household were naturally looking out, as the soldiers passed. Miss Rebecca was seen, and admired at first sight, by the captain, who in due time prosecuted and succeeded in his suit. When Mrs. Meard revisited her native Canobie for the last time, she had been absent fifty years. Both she and her brother George were not prepared for the changes which time had wrought in their appearance and associations during so long an interval; and an eye-witness of the meeting testified that there was little manifestation of feeling or sentiment on either side.

CHAPTER II.

BENJAMIN BELL, the eldest son of George Bell and Anne Corrie, was born in the town of Dumfries, in April 1749. We have no particulars of his boyhood, except that he received an excellent classical education under Dr. Chapman, who was in these days rector of the grammar-school, and eminent as a teacher of youth.

After leaving that institution he was apprenticed, at a very early age, to Mr. James Hill, surgeon in Dumfries, a man of considerable eminence in the southern counties, and the author of a small but valuable volume of cases in surgery, which is still read and quoted with deserved approbation. The young apprentice entered with great ardour upon his professional training, and speedily gained the confidence and friendship of his master by the assistance which he was soon able to give him, and by the conscientious manner in which he discharged all his duties.

In 1766, when about seventeen, he was sent to Edinburgh and entered the medical school, which even then was famous throughout Europe, possessing, as it did, not a few professors of distinguished talent and attainments.

Let us look at the men who then occupied the University chairs, and at whose feet the young student from Dumfries must have sat and learned.

Alexander Monro *secundus* had already taught anatomy since the summer of 1758, and was now about thirty-three years of age, the period of life at which a teacher is likely, if ever, to manifest the gift that may be in him, and to kindle within his disciples more or less of his own enthusiasm.

Alexander Monro *primus* was still in life ; and it is possible that young Bell may have listened to some of his lectures on clinical surgery and medicine in the Royal Infirmary ; but this is doubtful, for that great and good man died, as we know, worn out by a chronic and painful disease, on the 10th of July 1767. Dr. Joseph Black, a great name in chemistry, came to Edinburgh, as professor of that science, in the same year that Benjamin Bell commenced his professional studies. He had succeeded Dr.

William Cullen in the same chair at Glasgow, ten years before, and now again was his successor when that distinguished man was transferred to the chair of Physiology or Institutes of Medicine, rendered vacant by the death of Dr. Robert Whytt. Black and Cullen were appointed on the same day, November 1, 1766; so that both of them were doubtless among his teachers. The same remark applies to Dr. John Gregory (father of James), who also in the same year had come from Aberdeen, to occupy the chair of Practice of Physic, which advanced years and infirmity had led Dr. John Rutherford to relinquish in the preceding February. It may be mentioned, that by an amicable arrangement, doubtless with a view to the interests of the University, Drs. Cullen and Gregory lectured alternately on the Theory and the Practice of Physic, until the death of Gregory in 1773, when Cullen became sole Professor of the Practice of Physic. At this time, also, Dr. John Hope was the Professor of Botany;¹ so that any young man, really anxious to excel, possessed rare advantages in listening to the instructions of so many able and brilliant

¹ I am indebted for these facts to the "Life of Cullen," by the late Dr. John Thomson, Professor of Medicine and Pathology in the University of Edinburgh.

men, most of them in the very prime and vigour of life.

I learn from the Records of the Royal Infirmary, that so early as November 9, 1767, B. Bell was appointed a dresser in the surgical wards for a period of six months. His practical experience under Mr. Hill at Dumfries no doubt enabled him to undertake the duties at this stage of his more formal studies; and it is generally felt, I believe, that the sooner a youth can apply himself to the work in both departments, the more reliable will be his progress. The following letter to his father, written during the time of his dressership, lets us see that although barely nineteen, he was already aiming at the higher position of house-surgeon, and employing the necessary efforts for obtaining it. He exhibits a considerable amount of wisdom and knowledge of the world. To read such details after the lapse of a hundred years and the disappearance of three generations, makes one pensive :—

“Edinburgh, 23d February 1768.

“Dear Father—I am very vexed I should have omitted letting you know the names of the persons who have the power of nominating the clerks for the Infirmary; indeed, the only reason for my not doing it was, that when that affair

was first made known to the students, which was in December last, I and everybody here expected it would have been concluded one way or other immediately, so that writing to you, or any at a distance, to make application for me was never thought upon, as we were certain every one that had anything to say in it would be engaged by some one or other instantly, as a thing of that kind is always caught at upon the very first offering. I, being among the first that was acquainted with it, was so lucky as to get the promise of a very great majority of the gentlemen, which I thought was all that was necessary to be done, or indeed could be done; and if they keep to their promise, I imagine there is no fear but all will go well, as it depends either on the choice of the surgeons who attend the house, or on a majority of voices at a meeting of the managers, a list of whom you have enclosed, all of whom, except those marked thus $\times$, have promised me their interest; and three of these four declined it on account of being pre-engaged to another lad. The other—viz. Sir Stewart Thriepland¹—we could hear of nobody that was acquainted with him. There

¹ This gentleman, I find, was President of the College of Physicians in 1772; *vide* Appendix I.

is another gentleman, who, though not an appointed manager, yet has very great interest in all the matters of the house, that is Provost Lawrie. These are the only two that were not spoke to on my account. And now I hear the other three who were engaged to the other lad are at liberty, he being gone for the East Indies.

“ You would probably have some interest with Provost Lawrie through Mr. Henry;¹ but he will perhaps not choose to beg too many favours at this time, as he will presently have occasion for all the interest he can muster up, he being just now a candidate for one of the churches in Edinburgh, vacant by the death of Mr. Glen. However, if you know of any interest that can be made with any of them, it is not yet too late as matters have turned out; and, for anything I know, I shall spend the summer with you, at least part of it. Mr. Goldie wrote to Lord Elliock about it, but people are none the worse of being put in mind of things by different persons.

“ I have not time to write my mother by this opportunity, but shall do it by return of carrier. The butter came to hand by the Hawick carrier;

¹ Robert Henry, D.D., author of the *History of Great Britain*.

the pitcher was broke, but the butter was no worse and answers very well. I wish the price of it was known.—I am, dear father, your affectionate son,
BENJ. BELL.”

The expected vacancy does not appear to have taken place at so early a period as he anticipated. Probably he continued to perform the duties of a dresser after the six months had elapsed. This, however, does not appear; but on the 1st of May 1769 he was allowed to act, on trial, as Surgeon's Clerk in place of Mr. Thomas Williamson,¹ who had resigned the office after holding it for the long period of nine years. On the 3d of July following, the managers of the Infirmary, upon report of Mr. Bell's qualifications, elected him to the office. He was re-elected on January 1, 1770, and again on January 1, 1771. He resigned the office, which he had thus filled for nearly two years, on the 1st of April 1771.

The following letters, written during his residence in the Infirmary, may be introduced here. The first of them, to his mother, besides containing matters of general interest, exhibits him in an amiable point of view, while the second,

¹ Mr. Williamson was admitted a Fellow of the Royal College of Surgeons, June 23, 1769.

to his father, indicates professional zeal and very enlightened views, considering his youth, as to his own future course of professional study.

“Edinburgh, 25th April 1770.

“Dear Mother—I was in great hopes that before this time you would have got pretty much the better of your headaches, but am extremely sorry to find that I am thus so very much disappointed. . . . In order to render the bark more easily taken, I have herewith sent out a few wafers, which, however, I doubt will not reach you whole. If they do, you take one of them and let it swim a little on the top of a bowl of water till it begins to soften, then put a dose of the powder upon its middle, fold over the sides of it with a spoon, throw it into your mouth, and it will go over of itself without the least taste. You may take as much as easily lies on a shilling, of the barks four times a-day. In case the wafers should be broke in the carriage, you may take them in a little wine and water.

“Be sure to write me particularly about all your complaints next time (or cause one of the lasses do it)—what state your stomach is in, etc. etc. More barks and wafers will be sent in case these are found to answer.

“I am sorry to hear that little *Eben*¹ still continues distressed. His nurse tells me that he bore the weaning extremely well, so that I am persuaded his complaints principally arise from *teething*. In case you observe any teeth approaching it would ease him greatly, and at the same time facilitate their appearance, to cut the gums above them. For want of a better instrument, you might endeavour to scratch it a little with your nail, which, indeed, is the only method followed by a good many surgeons in such cases. If something of that kind is not evidently the cause of his complaints, or whether or not, I would for certain have a pea issue put either in his neck or arm. I have again and again seen such a practice of service when everything else had failed. You may propose to Mr. Mowat (of Longtown), in case you see him, and desire him to do it. I dare say he will approve of it.

“With regard to the use of the *cold bath*,—in a variety of diseases it is a most excellent reme-

¹ This was the youngest child of the family ; he was born in 1770, and died the following year. There were fifteen sons and daughters in this crowded household :—1. Janet, born 1748 ; 2. Benjamin, 1749 ; 3. Rebecca, 1750 ; 4. Thomas ; 5. Hugh ; 6. George ; 7. John ; 8. John ; 9. James, 1758 ; 10. Archibald ; 11. William, 1762 ; 12. Joseph, 1763 ; 13. Anne ; 14. Isabella, 1767 ; 15. Ebenezer, 1770.

dy, and even people in health are not the worse for it; but as Jenny's constitution (his eldest sister, born 1748) has all along been so extremely ticklish, I would be very cautious in using anything whatever that could have the smallest chance of affecting it. . . . The heat and flushing of her face and eyes may perhaps depend upon the season of the year, and will probably go off with the summer, as such complaints are very frequent in cold spring weather particularly. . . . I have no objection to Beck's using the *baths* (Rebecca, born 1750). She should not stand in the water above a minute at most; let her just go in over head and ears, and come out directly and dry herself. If she stays for any time in the water she will be much the worse of it in every respect.

“ You no doubt have heard that that most destructive affair, the plague among the horned cattle, has broken out in Nithsdale. Captain Ewart in Ninnholm is the only sufferer I have heard of yet. Eleven of his cows died from the disease on the second day that it was observed, and all the rest upon his farm were, every one of them, killed and buried in order to prevent the infection spreading. What a dreadful affair it is! However, by the measures taken, I would

fain hope no further damage will be sustained. There is no method of curing the disease, it is so quick in its progress—often so very much so, that the beasts drop down dead the minute they are exposed to the contagion. Therefore, everything is to be done to prevent the further spreading, for which purpose every method is to be taken that possibly can, in order to prevent communication between the diseased and sound cattle. But this is extremely difficult to do, and would require very particular attention, as the contagion is of such a very subtle nature that it can be carried many hundred miles upon people's clothes, or, in short, whatever it is first applied to, and yet, after a long space of time, be as apt to produce the disease as ever. This will show what caution is necessary with regard to allowing strangers, dogs, or any other foreign creatures, coming near sound cattle. In case you should be so unlucky (which God forbid) as to observe any of your cattle infected, every one of the rest should be immediately killed and buried. There is an Act of Parliament requiring every person to do so, and at the same time entitling them from the government, to every farthing's expense they suffer in that way. And accordingly, when the disease, about two months

ago, broke out in the West Highlands, 200 cattle were immediately killed, which effectually prevented, with other measures, the contagion spreading further."

It is interesting to find that the system of "stamping-out" the cattle-plague, as it is called, somewhat profanely, in our day, was carried into effect, with so much apparent success, nearly a century ago.

"Edinburgh, 19th January 1771.

"Dear Father—Uncle Hugh (Mr. Hugh Corrie, his mother's brother) and his companion arrived safe here on Tuesday evening about eight o'clock, for notwithstanding the deepness of the roads they could easily have got in by five or six, but were detained several hours at one of the stages for want of horses.

"You was informed, I understand, of my proposal of going abroad. You would no doubt wonder at not having heard of it from myself; but upon knowing the reason, I hope you will see the propriety of my conduct in that respect. It was a thing I had been long thinking of, and had always been sensible of the advantages I should reap in the prosecution of the scheme; but as it was merely a notion of my own, and as I was uncertain of ever getting it put in exe-

cution, I rather chose to defer mentioning it to any one till once I should have Dr. Gilchrist's* opinion with regard to it, as I looked upon him as being the most proper judge with respect to its utility; and had he disapproved of it, I should then have dropt it entirely, without you or any one knowing the least about the matter. For I could never see the purpose of making a fuss about any affair whatever, and more especially about one that we have the smallest doubts of ever coming to pass. This, I assure you, was my only reason for not consulting with you previous to any other person, and of which I imagine Uncle Hugh would inform you.

“I am sorry to hear that you had any objections to the scheme; all, however, that can possibly occur to you, I am sure appeared equally strong to me; but the reasons for going in with it in my opinion more than counterbalance any that have been started against it. The principal, and indeed only objection, is the expense of the scheme. That, to be sure, must be considerable, even in the most frugal manner the thing can possibly be done in; but yet, I imagine it might be accomplished for a good deal less than what perhaps occurs to you.

* An eminent physician in Dumfries.

£150 would be all that I should propose, and upon that I could manage matters genteelly enough. For this I am certain that I could acquire such advantages as would, in many respects, be of the utmost consequence in every after part of my life. These I cannot exactly point (out) to you; as you, and everybody not entirely acquainted with matters of that kind, will naturally imagine that everything in our way may be had to as much advantage in Edinburgh as anywhere else. To be sure, medicine is taught in Edinburgh in greater perfection than in any other part of Europe, or, indeed, of the whole world; but, notwithstanding, there are some particular branches which are to be had in Paris, and nowhere else, and which cannot possibly be got in Edinburgh, and particularly with regard to surgery, which I have now the prospect of applying pretty closely to, and upon which I am now altogether, for some time at least, to depend. Had I been now entering to the world as a physician, I should never have thought of going farther than where I have been; but for a *surgeon*, I assure you Edinburgh comes greatly short of either Paris or London, and for that reason, Dr. Monro and any others that I have spoke to here upon the subject,

approve of the scheme very much. Jack Gilchrist would likewise inform you that his father and he were of the same opinion. So that the question just comes to this, whether I shall forego all the advantages hinted at and save the £150, or be possessed of these by laying out the sum, though in the meantime attended with several inconveniences. It would, to be sure, be very inconvenient, but, for the reasons given, I am clearly of opinion that they ought not to prevent the execution of the scheme; and if it is by any means rendered abortive, I am certain that I shall always have reason to regret the cause. If the thing takes place, I would not incline to remain more than a few months longer here (in the Infirmary), whereas, if it does not, I must, in order to acquire advantages of the same nature, and these not in such perfection, remain in the Infirmary for, perhaps, six or eight years, in which time I am hopeful to be doing at least as much as would defray the expenses of the intended jaunt."

Having left the Royal Infirmary, as already noticed, on the 1st of April 1771, he was admitted a Fellow of the Royal College of Surgeons on the 5th of that month. But before commencing practice on his own account, he

carried out the plan of visiting Paris and London, the reasons in favour of which are stated so forcibly in the foregoing letter.

The only records that remain of this important period of his life consist of two letters. The first is addressed to his father from London, March 24, 1772, by which time the visit to Paris had been accomplished.

The letter needs some explanation, as it refers, for the first time, to matters of business, which caused the young surgeon much trouble and anxiety during several years, but at the same time served to exhibit both the generosity of his disposition and the wisdom and practical sagacity which characterised him through life.

Although George Bell succeeded his father in the farm of Woodhouselees, he was not the eldest son. He had a brother, Thomas, older than himself, who married Eliza, daughter of William Scott, Esq. of Mickledale in Ewes. He settled in Norfolk and died without issue. Of course, upon the death of his father, Benjamin Bell, he became the proprietor of the family estates of Blackethouse and Cushat-hill. But in a deed of entail, or rather of destination (1759), still in existence, his father had only given him the *lifereit*, and the *fee* to the

heirs of his body, and failing these, had destined the property in the first instance, to his grandson Benjamin, the subject of this memoir. In what year Uncle Thomas died is uncertain; but probably in 1762, from that date being written on the aforementioned deed of *destination* drawn up in 1759. It may have been a few years later, but certainly prior to March 1772, when, as we shall see, the young surgeon writes from London to his father, very explicitly and sensibly, in regard to the management of his property. The old gentleman, in thus passing over his own second son George, was probably actuated by *two* motives, although at this distance of time these can only be surmised. George, as we know, had already failed twice. He had failed as a merchant in the Levant trade, he had failed in the county town; and, as already hinted, this want of success probably depended, in some measure, on personal drawbacks not easily defined. On the other hand, it is more than probable that the grandfather, himself a sagacious and prosperous man, had recognised those qualities of forethought and wisdom in his youthful grandson, which appeared at a very early age, and ultimately became so conspicuous. Be this as it

may, the young student, upon the death of his uncle Thomas, came into possession, and it is very apparent that his father, George Bell, who had been passed over, experienced, for many years at least, a certain feeling of soreness, which shows itself in not cordially helping his son, as he might have done, in dealing with unreasonable or fraudulent tenants, whom Benjamin, residing at the distance of a hundred miles, with uncertain and tardy means of communication, had great difficulty in managing. The father was a practical farmer of experience. He lived within easy riding distance of the properties, and we often wonder, while reading the correspondence, that difficulties are not removed, and manifest impositions not redressed. There is, in short, an appearance of *laissez faire* on the part of Mr. Bell senior, which seems to convey the idea, that people who get properties, *out of the regular course*, should be allowed to struggle single-handed with any inconvenience which their good fortune may bring along with it. Perhaps these feelings were not altogether unnatural under the circumstances; but although obvious to readers now, the son, with all his clearsightedness, is never betrayed into the least appearance of suspecting their existence.

He maintains through the whole correspondence, with which we have no intention of troubling our readers, the most perfect good temper and filial respect.

“ London, 24th March 1772.

“ Dear Father—Yours of the 17th came only to hand about half-an-hour ago, and this being the night for the North post, I am obliged either to write you in a hurry, or refer it again for two days longer.

“ I observe what you say about John Bell. You know it was always my inclination that he should have his farm on reasonable terms, and I am still disposed to let him have it so, though he has by no means behaved so properly as what I expected, or could have wished. He surely could not be serious in the offer he made me, and which, you say, he still proposes for Cushathill, and this I formerly told him. I doubt he puts too high a value on that claim, which, it seems, he now so ungenteelly makes; for as to that bargain which he made with my uncle (Thomas), why did he never mention it till now, or what can he propose by it? At my uncle's death, you was of opinion (and was not Mrs. Armstrong so too?) that you favoured John greatly, by not binding him to the bargain he

was pleading for. However, as I want no favour of that kind, and that all justice may be done him, I insist upon its being settled in any way he chooses, either by law or arbitration. And if he will not cheerfully give the rent you mention (which is much under the value), it will be necessary to get a warning, and then, you know, his friends will be convinced how much we intended to favour him. I am not much set on high rents, but what I expect and insist upon is, that proper improvements be made, such as we formerly spoke of, and which can easier be made on that farm than any I know of, as almost the whole of the march or ring dykes are already finished, and such as are not yet done I'll finish upon the tenant's leading the stone. I'll expect the whole farm to be subdivided into inclosures of eight or ten acres each, as you shall plan out, and to be sufficiently secured with sunk fences and quickset hedges. The thorns I shall furnish. Round every enclosure the tenant to plant and take care of a row of trees, as also of all the wood growing or that may be planted; and to have proper posts and gates into every inclosure, and that the water of *Mean* be kept sufficiently banked so as to make no encroachments upon the farm.

“The way you proposed having your public road laid I think very convenient; the planting when got up will look very well. The above are such articles as appear to me to be of the greatest consequence. Whatever I may have neglected, however, you will take care shall not be omitted. And it will give me great pleasure to hear that you and John agree; but though on many accounts I would prefer John to any other person, yet I must again say that no tenant whatever shall have it, unless he consents to every necessary article of improvement, and binds himself accordingly, to the proper execution of the engagement.

“I had a letter two days ago from Jack. He mentions Tam’s letter of November, which my mother takes notice of. I am just going to spend the evening with Mr. W. Corrie, who came to town this afternoon. Edgar is here too; both join in compliments. My mother I hope will be much better of her intended visit to Dumfries; having been so long confined, something in that way I think is necessary. I shall probably be down by the middle, or at furthest the end of May, which is sooner than what I intended; but I find that by that time

I shall *have got everything I expected here*.—I am, dear father, yours affectionately,

“ BENJ. BELL.”

The following letter, written a week later, to Dr. Cullen, one of his former instructors, has been already printed in Dr. Thomson's life of that gentleman, but we think that it is too interesting to be omitted here.

MR. BENJAMIN BELL to Dr. CULLEN.

“ *London, 30th March 1772.*

“ Sir—I confess that it ought to have been my duty, as much as it was my inclination, to have wrote you long before now, and that merely by way of return for the many civilities I had formerly received from you ; for, being the only acknowledgment that I had it in my power to make, it might readily be expected that I should not so long have omitted it. My only reason for doing so was, that I seldom met with anything worthy of your observation, at least so far as to excuse the freedom of troubling you with it. Nor should I at present have ventured upon it, but that the time of my return drawing near, I found if I did not set about it that it presently would be too late. Amongst other obligations which I lie under, that of your letter of intro-

duction to Mr. Hunter I consider as none of the most trivial, for by it I have had the pleasure of a most agreeable, and at the same time the most useful, acquaintance I ever met with; for there is scarce an article, either in physic or surgery, that Mr. Hunter has not something new upon, and there is none more ready of communication than he is. He has frequently desired his best respects to Dr. Cullen, and which now, for the first time, I deliver. I am likewise just now attending Dr. Hunter's anatomical course, which indeed is extremely ingenious and satisfactory; but the Doctor is by no means so free or so ready of access as his brother.

“There is not much new in the medical way here at present. Dr. Hulme has lately published a treatise upon Puerperal Fever, which by this time you will probably have got down to Edinburgh. The Theory and Practice of Physic, by Dr. Macbride, was published two days ago, but I have not seen it. I was present at the last meeting of the Royal Society, when a very ingenious paper upon the Nature and Properties of Air, by Dr. Priestley, was read, and which I hear will soon be published. He adopts Dr. Macbride's theory of fixed air and putrefaction,

and mentions the effects of such air in putrid diseases. One very bad case of putrid fever was particularly related, which seemed to be cured by it, and after every other remedy had been successively made use of. The air was injected in considerable quantities by the anus, and from its very first application the patient seemed to be relieved. A number of other very curious experiments were likewise mentioned. It is generally allowed, and indeed now sufficiently proved, that any given quantity of air can soon be spoiled, or rendered unfit for the purposes of life, by one or more animals frequently breathing it in a confined place. Now, in course of time, we should be apt to suspect that the whole atmospheric air would be so tainted by the breathing of such a number of animals as are everywhere met with, as at last to become equally poisonous with that met with in confined places. Dr. Priestley, however, imagines that nature particularly guarded against this, and for which purpose he thinks it probable that she has several resources, and one of them he has been so lucky as to discover. Mephitic air being confined with growing plants, is not only thereby entirely changed and again rendered pure, but the growth of such plants is likewise

very considerably quickened. From this, and other experiments to the same purpose, he concludes that the bad effects of the breathing of animals upon the atmosphere is counteracted (in a great measure at least) by the plants which are everywhere found upon the earth, and that such air is even, in some degree, necessary for the proper production of these plants.

“About six months ago there was published in Sweden an account of the discovery of a *new acid*, which had lately been made there by a famous chemist, Scheele of Stockholm. As I was very desirous to know the particulars, I got a Swedish acquaintance who took the trouble of making me an extract of the principal parts of the publication, and afterwards translated them. This you may, perhaps, have already seen; but lest you should not, I shall now beg leave to enclose a copy of it. The discovery may perhaps appear to you as trifling, but its being entirely new, to me at least, I hope will excuse my mentioning it; and as by this time you will probably think I have said enough, I shall therefore beg leave to conclude, and am, sir, with great respect, your much obliged humble servant,

BENJ. BELL.”

CHAPTER III.

1772.

OUR young surgeon probably adhered to his purpose of returning home by the end of May, for the following letter shows that he had taken up house along with one of his sisters, and was already settled in business, before the middle of July. And we find, from the records of the Royal Infirmary, that he was enrolled as one of the surgeons of that institution on the 3d of August 1772. These records, I may here mention, are unfortunately lost betwixt 1775 and 1789, so that his entire period of service cannot be ascertained from that source; but, judging by the title-pages of his various works, he appears to have held office in the institution for at least twenty-nine years.

“Edinburgh, 13th July 1772.

“Dear Father—Beck wrote my mother very fully by the carrier, and as she would then, I imagine, mention every particular with regard to

our house, etc., I need say nothing upon that head. As yet, we seem to be very conveniently lodged, and have now got things into some kind of order, particularly the shop, which I expected would be a very troublesome affair; but luckily learning of a man who was about to decline business, I purchased his shop and had it removed over here—I mean the utensils, such as drawers, counters, mortars, etc., which made it much more easy than if all those had been to get *new*. The room above stairs makes a very good shop, so that we are perfectly free of every incumbrance of that kind below.

“ I hope you are by this time well advanced in your hay-harvest; the weather for that purpose has been for this fortnight past extremely fine, and I hope it has been the same with you. 

“ As Beck has something to say, I shall conclude, and am, dear father, your affectionate son,
BENJ. BELL.”

“ Dear Mother—I wrote you by John Hyslop on Wednesday last, and only write this to desire you would send us in some butter with him next week, if you can do it conveniently; it is very dear here. Though it were a small quantity and to come oftener, would answer us better than getting a large pot. If there could

be another bed-quilt done, we would need it, as the one I brought in for Ben's bed is quite too large, and it is a pity to cut it. But if you cannot get John to do it, do not think of it, as we can put off a while without it. I am, dear mother, yours,
B. BELL."

We may mention here, before proceeding with his life at home, that during Mr. Bell's residence in Paris, which preceded that in London, he was on very intimate terms with another young Scotchman, James Hamilton. They were fellow-boarders, we have been told on excellent authority, under the roof of the celebrated Baron Portal, and thereby enjoyed great advantages as students of medicine and surgery.

Antoine Portal was born in 1742, and was therefore only seven years senior to the two young Scotchmen. He had by this time published his *Precis de Chirurgie pratique* in two volumes octavo, for the use of his students, so that we can discover the attraction which he must have presented to the subject of this memoir. He was in those days a man of great energy, and full of professional enthusiasm, with ample opportunities for both acquiring and communicating knowledge. In 1770, a year before their arrival, he was raised to the chair

of medicine in the College of France. He filled it with great credit for the long period of sixty years. He died in July 1832, at the ripe age of ninety.

The intimacy formed amid these surroundings, by Benjamin Bell and James Hamilton¹ was the beginning of a life-long friendship, which tended eventually, we have no doubt, to their mutual advantage.

Mr. Bell commenced practice with no adventi-

¹ Dr. Hamilton published in 1805, as the result of mature experience, a treatise entitled : " Observations on the Utility and Administration of Purgative Medicines in several Diseases." It was a book of much practical value, and remarkable, among professional works, for the conciseness, perspicuity, and classic elegance of its style. The eighth edition, with a new chapter on cold bathing, considered in its purgative effect, was published in 1826. The author was a much-esteemed physician, and well-known citizen. His appearance must be still fresh in the remembrance of many: his upright, elegant gait, his elastic step, his dress of the old school, his expression of mingled shrewdness, refinement, and benevolence. He possessed a vein of genuine humour, of which the following anecdote may serve as a specimen :—A medical friend of the name of Yule, happening to complain to him that he found advancement in his profession very slow, he rejoined : " How can you expect it to be otherwise ? Don't you see that every one will naturally say, ' A green Yule (Christmas) makes a fat kirkyard ? ' " Dr. Hamilton died in 1835, at the good old age of eighty-six.

tious support, having literally no friends in Edinburgh, except those whom he had made during his attendance as a medical student at the University, and his residence in the Royal Infirmary.

It may be gathered from his correspondence that he began his professional life in a very modest way, and had many difficulties to contend with for some years. But when once his prosperity began to dawn, it spread and brightened with unusual rapidity. The Edinburgh of those days, let us remember, differed materially in many respects from the Edinburgh of 1868. A very small part of what is now called the New Town was then in existence; and the suburban districts, now so largely built upon, were corn-fields and pastures. The various classes of society were brought more into contact; the distances which the medical practitioner had to traverse in visiting his patients were less considerable; there was generally more leisure and more casual intercourse; and it is probable, therefore, that real capacity and merit in any profession or calling were more speedily recognised and rewarded by the community. Add to this, that the general standard of attainment in the profession was

not so high as in the present day, and we cannot wonder that a young man of ability and steadiness, whose opportunities for acquiring professional knowledge and experience were known to be greater than ordinary, should be regarded with peculiar favour. All that our young surgeon needed was a fair start, and this was accorded to him, from the circumstances of the time and place being propitious, while his own personal qualifications were equal to the occasion. His appointment as one of the surgeons to the Royal Infirmary in his twenty-fourth year must be regarded as both a proof of the high estimate already formed of him and as an earnest of future success. His intimacy with James Hamilton must also be taken into account. Besides being the son of an esteemed professor,¹ and well connected by his mother's

¹ Robert Hamilton, D.D., was chosen to the theological chair in 1754. His father, Dr. William Hamilton, had held the same office betwixt 1709 and 1732, and during the last two years of that period had been principal of the University. Robert Hamilton was presented, soon after being licensed, to the parish of Cramond in the vicinity of Edinburgh. Afterwards he was successively minister of Lady Yester's and of the Old Greyfriars Church. Upon being elected professor, he demitted his office as one of the ministers of the city. He was a man of decided ability and much esteemed. Although generally a supporter of the moderate party in

side—Jean Hay of Haystoun in Peeblesshire—he had already occupied for nearly a year the church politics, he was evangelical in his religious sentiments. He was twice Moderator of the General Assembly—viz. in 1754 and 1760. Being in office at the time when George II. died, he headed the deputation sent to London to congratulate George III. on his accession to the throne. When he began to feel that the state of his health prevented him from performing the duties of his class as he wished and had been accustomed to do, he applied for an assistant and successor. Dr. Andrew Hunter was, in consequence of this application, elected conjoint Professor of Divinity, September 10, 1779. Dr. Hamilton soon retired from public life, and died April 3d, 1787, in his eightieth year.

Principal William Hamilton, the father of Robert, was the younger son of Gavin Hamilton of Airdrie, a well-known Covenanter, and being born in troublous times was baptized at a conventicle. The following notice occurs in the memoir of Dr. Leechman by Wodrow of Stevenston :—“Dr. William Hamilton was a man much esteemed for the wisdom and good temper with which he conducted the debates of the General Assembly, and no less esteemed for his learning, judgment, and candour as a teacher. I have heard Dr. Leechman say that he was under great obligations to Dr. Hamilton ; that he learned much from him on many points about which the professor spoke his mind openly ; and that, young as he was, he learned something also on other points *about which the professor said nothing*. The *silence* of such a man struck him, it should seem, and led him to investigate the causes of it.” I may add that his brother Robert, the eldest son of Gavin, was ancestor in a direct line of the late Sir William Hamilton, the distinguished professor of logic and metaphysics in the University of Edinburgh.

honourable position of Physician to the Royal Infirmary; a position whose duties he continued to discharge for half-a-century in the most efficient and creditable manner.

It may be mentioned that among other friends of his own age whom Benjamin Bell was in the habit of meeting at Professor Hamilton's in those days, was a young student of theology, Mr. Moncreiff, afterwards better known as Sir Harry Moncreiff, Bart., the minister of the West Church, and the recognised leader of the evangelical party in the Church of Scotland. It is interesting to learn, on the authority of one who remembered those occasions, that Mr. Moncreiff was then remarkably bashful and retiring in his demeanour. In after life, as is well known, he stood conspicuous among his contemporaries as a man of powerful intellect, self-reliance, and great moral weight in the cultivated circles of Edinburgh.

Mr. Bell's natural and acquired qualifications for the healing art, with pleasing manners and those personal characteristics which inspire confidence, brought him, as we have said, very rapidly into notice, so that in two or three years he married Grizel Hamilton, the only sister of his friend. She was his senior by a few months.

Everything bade fair for domestic happiness and increasing usefulness in his profession, when his career was suddenly arrested for many months by a serious injury occasioned by a fall from horseback. So little sanguine was he himself of obtaining a complete recovery, that, partly from prudential considerations and partly yielding to a passion which he had always felt for rural pursuits, and which continued to the end, he took a lease of the farm of Liberton, about three miles to the south of Edinburgh, on the eastern slope of the Braid Hills.

After the lapse of nearly two years, a period which he turned to good account in preparation for future professional publications, it pleased God to restore him to health. The farm, which was intended as a source of livelihood, afterwards became a solace and recreation to him amid the anxieties and pressure of business; and the old house there continued to be the summer residence of his family during many years, although Mr. Bell himself, in those days, very rarely spent a night out of town.

I have heard it mentioned by one who had access to know all the circumstances, that he was greatly indebted, during his long confinement, to the friendly interest taken in his case

by Mr. Alexander Wood,¹ the well-known surgeon, who was in those days at the top of his profession in Edinburgh. A rumour having gone abroad that his patient was hopelessly laid aside by mental disease, Mr. Wood contradicted the statement in his own strong way, giving it as his prediction that the young man whom they represented as mad would very speedily let them see that he had more good sense and capacity than all of them put together.

At an early period after returning to business, he entered into partnership with Mr. James Gibson, a Fellow of the Royal College of Surgeons. That gentleman was his senior by eleven years, but had joined the College in 1770, having served in the army as an assistant-surgeon before settling in Edinburgh. This connection was of comparatively short duration, and few particulars can be gathered concerning it. Mr. Gibson is said to have been a man of liberal mind and high principle, combined with a retiring modesty, which perhaps rendered him less successful in life than he might otherwise have been. Judging from a well-painted portrait of him by George Watson, which we have seen, he had a fine person, and must

¹ F.R.C.S.E. 1756 ; President 1762-3.

have been an amiable member of society. He died in 1815 at the age of seventy-seven.

There is an interval of nineteen months in which no letters have been preserved—viz. from July 11, 1774, to February 22, 1776, when the correspondence is resumed. We are informed, but only incidentally, of the two important events in his history already mentioned—his marriage and his protracted illness. Up to this date neither of his small landed properties had been sold; but now he is more decided, if possible, than ever, as to the necessity of that step. We cannot help feeling that his circumstances at this time, all things considered, must have tried his firmness of character very sternly, and have done much to prepare him, by salutary discipline, for the useful and honourable career which lay before him.

There is a long and well-considered letter from Mr. Hugh Corrie,¹ his uncle and man of business, to Mr. George Bell at Woodhouselees, strongly approving of the proposal to sell the properties, and smoothing any difficulties which the old gentleman might feel as to the

¹ Mr. Corrie was a well-known writer to the Signet, and one of the chief promoters of the British Linen Company's Bank.

immediate carrying out of the transaction. This, like all Mr. Corrie's business-letters, indicates to my mind that he was a very superior and excellent man—clear-headed, reasonable, and kindly in his dealings. He concludes with these words :—“ *Ben* is, I think, a good deal better. My wife got out in a chair to-day (February 29, 1776) for the first time since the middle of November. I hope as the season advances they will both recover their strength.”

This shows that the young surgeon, although better, was not able for much exertion. His letters, even in the midst of his own anxieties, are full of the kind brotherly interest which he at all times took in the members of his father's household. This was a marked feature in his character; and it is very obvious, that although he had been constituted his uncle's heir in preference to his father, he invariably acted as if he felt an obligation resting upon him to help his brothers and sisters, by education and otherwise, out of the comparatively limited means to which he had fallen heir.

The following letter, besides helping our narrative, may serve to illustrate the fraternal thoughtfulness of which we speak :—

“ Liberton, 12th January 1777.

“ Since coming to Liberton, as the road to and from Edinburgh is all up and down hill, I have been much plagued with Gypsy, as she has a bad trick of stumbling and catching stones with her feet on going down even the easiest braes. When on my guard I don't mind it, but it is impossible to be always so. When on the other side of the town I had no opportunity of discovering this fault in the mare, as the roads there were all as straight as a bowling-green. As I have only a few miles to ride every day, a neat little galloway would answer all my purpose equally well with a large horse—would be cheaper and easier maintained—and would, I imagine, *be fully safer, a circumstance you'll not wonder at my now being very anxious about.*

“ As *Jamie* and *Will* are now got to Dumfries, you'll surely let them both stay as long as possible. *Will*, I make no doubt of your continuing there, and as it is probably the best opportunity *Jamie* will ever have, either for seeing *something of the world* or for improving himself in different branches of education, it would really be a pity not to give him all the time there you possibly can. I know you can

ill want him, but as it is once for all, and as the longer he is now away the more useful he will probably be, I daresay you will stretch a point and allow him to stay as long as possible.

“ You will not, I hope, my dear father, ever take amiss what at any time, in things that may not seemingly concern myself, I shall happen to give my opinion upon; for whenever I do it, it is always at least with the intention and desire of being useful; so if what on such occasions I may happen to hint shall ever to you be disagreeable, you will not, however, I persuade myself, impute them to anything but the true cause. I think I formerly mentioned to you my opinion with respect to *Jamie's* situation, and wished that he could be put on such a footing as to give him some prospect of being in the way of doing at least some little for himself. What I then proposed was, your giving him a small share in the stock of the farm, and allowing him to reap the profits of it. For he is now come such a length (nineteen), as to require and even to deserve some encouragement of that kind. My plan in such a case would be this:—To value all the stock at such rates as James himself could have no objections to, and for that reason would even take his opinion and

assistance in it. Upon finding what the whole amounted to, I would make him a present of a sum equal to what I could afford to give to each of the other children; £50, for instance, if the stock amounted to £600. I would take James's bill for fifty more, and give him a sixth part of the whole stock—he to receive all the profits that in proportion should arise from the farm, without being at any share of the expenses, for so long as he had only a sixth share, his time and trouble in managing the rest I would consider fully equal to what his share of the expenses would amount to. Independent of his present share, I would allow him to increase it to a fourth or even a third of the whole, so soon as his savings from his small share would enable him to purchase it; and then, as his profits would be more considerable, I would have him to bear his proportion of expenses. That you are capable of pointing out a preferable plan for carrying the thing proposed into execution I have no manner of doubt, but some such as I have hinted at would, I am confident, be attended with very good effects; and as it is really what I think James entitled to, I am hopeful you'll not be long in putting it in execution, and that especially, as I daresay,

whenever you think on the subject, it must probably strike you in the same light it does me.

“For this fortnight and more we had a very severe storm here, both frost and snow, till yesterday that a keen thaw set in, which will not, however, I am afraid, be very lasting. We are all writing to Tam by a ship which sails from Leith, in a few days, for Jamaica. Mrs. Bell and Becka are both to write, as I am going to send a frank. As the privilege of franking is to be taken away, amongst the first things done on the sitting down of Parliament, everybody here are using what they have got, and I would have you do the same by yours. The only method they have of preventing the practice is, by taking the privilege from the members of Parliament themselves, both Lords and Commons.

“With best love and duty to my mother, and compliments to everybody else, I am, etc.,

“B. BELL.”

CHAPTER IV.

1777--1779.

THE following letter intimates the birth of his eldest child :—

“ Liberton, 2d February 1777.

“ My dear Mother—Although it is long since any of my letters were actually addressed to you, yet those to my father, except such as were altogether on business, I hope you would consider as equally intended for both, at least by me they always were, and I should be exceedingly sorry indeed, if my seeming negligence to you should be interpreted in any other manner. You will, no doubt, wonder at hearing so soon from us, after receiving a large packet from me by this night’s post, which was sent off yesterday in a frank ; but I make no doubt of your rejoicing at the occasion. About three o’clock this morning, you and my father were both raised a step higher in the rank of

parentage, Mrs. Bell at that hour having been delivered of a fine boy. Every circumstance in the play went remarkably well on, and both she and the child are just as well as we could desire. In mine of Friday I did not give you reason to expect it would be so soon over, for although the midwife was in the house, I did not expect it would have happened altogether so soon, and besides, I thought it best not to keep you in a state of anxiety. Mrs. Bell is already so well as to have sent away the midwife. Indeed, she can be at no loss, as Mrs. Hamilton was with us in less than an hour after the affair was over, and will probably stay for some time. The Professor came out in the forenoon, and christened the child. He is, as you will readily imagine, named George.¹ He is a

¹ George Bell, whose birth is thus announced, lived to be an eminent surgeon, amply maintaining the reputation of his father. He enjoyed many educational advantages at the High School and University, and after that prosecuted his professional studies under the eye of a circle of friends, such as Hamilton, Monro, Russell, and James Gregory, all at that time in the prime of life. During the same period he was on very intimate terms with Dr. John Barclay, afterwards the celebrated teacher of anatomy, who, although seventeen years his senior, was very nearly his contemporary as a student. Like Barclay, after passing through the Edinburgh curriculum of study, he repaired to London, and there

fine healthy-like fellow, and has already, I am told (by the keeper), shown several signs that prosecuted anatomy very sedulously under Dr. Marshall, a well-known teacher in those days. At the same time, while embracing every opportunity for acquiring surgical experience, he attached himself principally to the London Hospital, and so formed a life-long intimacy and friendship with Mr. Thomas Blizard, who was then rising rapidly into fame as one of the best surgeons of his time. This gentleman, I may remark, retired from active professional life in 1817, at the comparatively early age of forty-six ; but all who knew him and were capable of forming an opinion, held that he was second to no one as a sagacious surgeon and brilliant operator.

George Bell did not visit Paris, as the revolutionary war was then raging ; but returned to Edinburgh, and soon thereafter was admitted a Fellow of the Royal College of Surgeons (May 1, 1798). In the capacity of his father's assistant and partner, he had full employment from the beginning, and at a very early period became connected with the Royal Infirmary, as one of the surgical staff.

Upon his father's death, in 1806, he took a prominent place at once, although he had several able competitors, and during the next twenty years enjoyed a very large share both of general and surgical practice. He was continually called upon to make distant professional journeys, often during the night, without the facilities and comforts of the present day ; and every autumn he visited Dumfriesshire and Cumberland, where cases for consultation and operative procedure were always awaiting his arrival.

His health began to give way in 1827 ; but he persevered undauntedly in his professional toils and anxieties for a few years longer. He died in August 1832, at the age of fifty-five.

forebode great future sagacity. What dependence are to be had on such remarks time must try. Mrs. Bell is, as you will not doubt, to attempt nursing, and I am hopeful it will answer, as I think it a matter of the greatest consequence both for mother and child, in every case where the health and situation of the former can by any means admit of it. As I know you'll be anxious to hear from us, Becka or I shall write again by Thursday's post; and as our friends at Scarbank (the Mowats) will likewise probably be glad to hear the accounts, I shall write them a few lines by this day's post."

A letter follows, dated 6th February, in

He was very eminent as a lithotomist; and the late Mr. Liston told me spontaneously that he had never seen George Bell's equal in *extracting* the cataract.

He published a very excellent treatise upon cowpock in 1807, and at different times, several notable and instructive cases in operative surgery.

Mr. Bell was a man of warm affections, and of generous and liberal sentiments. He spared himself no trouble or exertion to serve a friend. His long illness was borne with exemplary patience and resignation. Instead of becoming occupied with himself, as is too often the case, he grew more unselfish and considerate for others, and gave many unmistakeable evidences of a mind weaned from worldly pursuits, and reposing upon the well-grounded hope of a blissful immortality. *Vide* Appendix II.

which he enters with much brotherly concern into the prospects of his brother Thomas in Jamaica, and also urges upon his father the desireableness of James remaining as long as possible at Dumfries for educational purposes. "I am so much convinced of this, and of the utility that merely other three or four months would be of to him, that I must desire you at all rates to let him remain there for that time. If I was plenty in cash I would remit what was necessary for his expenses for that time, but it will be nearly the same to you my allowing you the money at settling, which, to the extent of ten pounds, you may charge me with for that purpose, and which I hope will be found sufficient for all the additional time you can easily spare him."

This gives us another glimpse of the generosity with which our young surgeon, with all his own difficulties in the shape of a slow recovery from the effects of his accident, increasing domestic expenditure, and ill-paid rents, did his utmost to help on the other members of his family.

He seems, all along, to have taken a special interest in his brother Joseph (born 1763). He was a very promising youth, and passed success-

fully through the curriculum so wisely planned for him in the following extract.

Writing to his father (22d February 1777) about Joseph's education, he suggests that, with the old gentleman's approbation, an early application should be made to the managers of the Royal Infirmary for the situation of apothecary's assistant, and says:—"After being a proper time in *it*, he would rise *of course* to the different gradations of clerkships. In this way he would obtain the most complete course both of medical and philosophical education, as the clerks and apothecaries in the Infirmary *have the privilege of attending all the classes gratis*.¹ He would get it, therefore, at little or no expense, and without being in the least hurried, which, from the expense attending a college education, very seldom falls to the share of our Scots students. Few of them get above two or three winters at most. Now no one in that way can be thoroughly educated under five or six, an expense not many of our countrymen can easily afford."

We learn, from a letter dated 27th February, that he was still by no means restored to his former health and strength. Speaking of a

¹ This has long ceased to be the case.

friend who had been dangerously ill of fever, and whose mother and sister had hurried into town to see him, he writes—"I was very anxious to see George while in the fever, and as they had expressed a great desire to see me, I attempted their stair; but as it is the highest house I was ever in, being no less than six storeys, I found myself too much fatigued to attempt it again. I hear of them, however, daily, and every assistance in the medical way was all along given, which made me in that respect the less anxious."

The old outstanding annoyance of the tenent of Cushathill not paying his rent and neglecting to improve his farm is once more brought forward. It affords the writer an occasion for manifesting very conspicuously his own knowledge of agricultural science, and its familiarity with its practical details. There can be no doubt, I imagine, from this and similar discussions, that he was in advance of the time in which he lived, and might have been quite as eminent as an enlightened farmer as he afterwards became as a surgeon.

It appears that his residence was at this time in the Assembly Close; but they left it later in the year for one more commodious and easy of access.

“ Liberton, September 17, 1777.

“ We have got fixed at last, in a very good house in town, and propose going in about the 20th of next month. It is very well aired and lighted, with an easy access of one storey from Niddry’s Wynd, and an entry from Kinloch’s Close, without any stairs.”

The following extract may interest some readers, as illustrating the great difference betwixt our own time and ninety years ago in the matters of locomotion and conveyance of goods.

“ Yours of the 5th current did not come to hand so soon, by several days, as it should have done ; and I afterwards delayed answering it till I could give you some satisfaction about your commission for tar. I have an acquaintance who deals in that article, on whom I can depend ; but as he had no genuine Norway tar out of Leith, and as it could not be got from thence for last week’s carriers, I thought it better to delay sending it a week than that you should run any risque of being imposed on by my taking it from another. As it will now, however, go by the first Hawick carrier, you may expect it some time this week. Russia tar is just now at 30s., Swedish at 35s., and the lowest price of Norway tar is 40s. per barrel.

I am assured, however, that even in point of quantity, Norway tar is cheaper than either of the others, for the measure of both the Swedish and Russian barrels comes much short of it."

The following passage from a letter to his father, of date December 22, 1777, seems to merit a place here :—

"I intended to have sent this by Captain Scot, who sets off this afternoon, but thought it might be delayed in that manner. Mr. Scot is really a pleasant, agreeable man. I wish you and that family were on a better footing. He, I find, would incline it much, and the only way to continue is, on no occasion whatever to come over *old stories*. It might be of use to you both, I think, being on that footing."

Captain Scot was a son of William Scot of Meikledale, in Ewes. His sister, Eliza Scot, was married to Thomas Bell, the eldest brother of George, and the uncle of Benjamin, to whom, as we have seen by his father's destination, he left the liferent of the properties of Blackethouse and Cushathill. That was probably one of the old stories referred to, which had led to the uncomfortable state of feeling. It is interesting to notice in connection with this, that Captain Scot's son (Mr. George

Scott Elliot, of Larriston), married, about forty years afterwards, the eldest daughter of James Bell (George Bell's seventh son), in regard to whose future plans and prospects Benjamin had entered so fully in a former letter.

The following incidental allusion to his brother-in-law Gavin Hamilton (1st January 1778) is interesting:—

“The application to the Lord Advocate was with respect to my brother-in-law Gavin Hamilton. He has now spent several years in attempting to succeed as a writer; but from the different interferences of connections in the same way, and other circumstances, there was little reason to think that he could do anything considerable, for at least a considerable time. This gave him a distaste at the business, and a plan was pursuing for getting him out to the East Indies, where his elder brother is now pretty well on in the Company's service. Upon these new regiments being raised here, it occurred that if any advanced rank could be got in one of them, it might be right for him to accept of a commission; and accordingly, through the Lord Advocate's interests (the Right Honourable Henry Dundas), he has got a lieutenancy in M'Leod's regiment. And if

he can be got in among the first lieutenants, if this war lasts he may not unlikely get a company at very little expense, which, as he has a turn for that way of life, is a very genteel thing for him."

To his father :—

" March 5, 1778.

" My mother wonders at my never having mentioned the book¹ I have been publishing. It never occurs to me to write about anything of that nature ; but of late I have been a good deal taken up with it, correcting the press and other circumstances, for although I have been engaged in it for some time, it is only just now published. There is another circumstance that has occupied me a good deal of late, but which you need not take notice of to any of our friends, on account of the delicacy which, I think, in those matters should be always observed. A Mr. Tod,² a nephew of Professor Hamilton by his mother, has, for some years, been settled here as a surgeon. He, poor man, is seemingly dying in a consumption. He is

¹ A treatise on the theory and management of ulcers, with a dissertation on white-swellings of the joints ; to which is prefixed an essay on the chirurgical treatment of inflammation and its consequences.

² John Tod, F.R.C.S.E., 1753.

surgeon to Watson's Hospital of this place, which, though a position of no great emoluments, is, even in that view, worth having, and is of very great consequence to a young man, from the connection it gets him with the managers, who are commonly a respectable set of people. My best chance of obtaining the appointment was to have it secured during the life of Mr. Tod, and before the danger of his situation was known to many of my brethren. This I have got done, and so securely, I imagine, that although there are now many applications for it, I have no doubt, in the event of Mr. Tod's death, of obtaining it. The application was, on my part, a very delicate matter, on account of our connection with Mr. Tod; but I did it with the knowledge and approbation of his own friends, who were convinced of his being seemingly in a very bad way. I'll let you know finally how this matter ends."

Indications of professional progress begin to appear.

To his father:—

" March 30, 1778.

" In a short time I shall want to have one or two, if you can spare them, of your young horses; but if I get two, one of them must be

by way of exchange for the black mare I had from you. The reason for my wishing to change her is, that since I began business again I cannot find time for riding, which was the chief purpose I got that mare for, but as I have not been on her back for these five months, I have no chance (I hope) of needing her in that way again. I would much rather have a strong horse *entirely* for work; for although she works well and most willingly, yet she has not strength of body to work along with the bay mare; for when two horses are unequally matched in point of strength, one either does not get sufficient work out of them, or the weak one must suffer by being obliged to work as much as the other is able for."

To the same :—

"April 18, 1779.

(There had been an idea of his brother *James* going abroad.)

"That circumstance you take notice of, of the *tack* of Woodhouselees farm depending on James' life, is another great objection to his going abroad. In case James should go abroad, endeavours should be made to get *Will's* life or some other person's fixed on (though this may probably be difficult, or perhaps impossible, to

get the Duke to consent to); for if James does go either to the East or West Indies, your tack will rest on a very precarious footing. If to the West Indies, his life would not be worth above six years at most—that is, the chance would be against his living longer—whereas in Scotland, at his time of life, his chance is to live about twenty-seven years; a very capital difference to you in the possession of the farm.”

The old gentleman himself survived thirty-five years from this date, and James eighteen years longer.

To the same :—

“ *April 22, 1778.*

He says :—“ I wrote you my sentiments with respect to a military life for either James or Will. The Duke of Buccleuch has named his captains, and one or two of his lieutenants. The former are all men of considerable fortunes; *John Home* the poet, formerly a Presbyterian clergyman, is among the latter—viz. the lieutenants.”

He alludes again to the appointment of a surgeon to George Watson’s Hospital, for which he had applied, being about to be filled up in a few days. “ I am now altogether certain that I am to get it. I had some difficulty, however, in getting it thoroughly fixed, for though, as I

formerly wrote you, the emoluments attending it are not great, yet, from different circumstances, it is an object that all my brethren thought worth their attention. This and the keenness of party politics, which still in some measure prevails here, raised a good deal of opposition long after I thought I had it perfectly secured. Such, however, as did apply have now found that they have no chance, and have accordingly desisted, and I have no sort of doubt of being fixed with the unanimous consent of the managers.¹ And it is a thing of that kind that is continued for life, or for good behaviour, which I shall endeavour to make the same."

"Edinburgh, 14th May 1778.

"George is sent out to Liberton for the summer, and Mrs. Bell and the Professor intend to follow him the beginning of next week. I get out a start now and then, but now that I am *fully able to manage my business* I don't mean to go out to live there again."

¹ This appointment as surgeon to George Watson's Hospital was held by Mr. Bell during the remainder of his life. He was succeeded in it by his son George, who died in 1832; George was succeeded by his brother Joseph, who died in 1848; and the writer of this has, in his turn, held the appointment from that time to the present.

“ *July 9th, 1778.*

“ We were made happy yesterday by my mother’s letter, informing us of you and her intending us a visit. We have long wished for it, but knew not how to propose it, from the considerable distance and your unwillingness to leave your own house; but since you have now agreed to it, nothing I hope will occur to prevent it. As I intended being out some time this season, from not having the prospect of getting away so easily again on account of my copartnery with Mr. Gibson being soon at an end, (and which will not, perhaps, be renewed, but which need not be mentioned), the easiest method for my mother getting in will be to return with me; and as *Ann*¹ will be going home about that time, it will be the best method for her travelling likewise. I mean to hire a *whisky*, or two-wheeled chaise, to drive with my own mare; and as I can get one large enough, and as we would make easy journeys, I intended asking the Professor to go along with Ann and me; but this I’ll not can do, unless you can make me sure of one of your mares to return with. She would draw the Professor and my mother, and I would ride my own mare; and

¹ His youngest sister, afterwards Mrs. Maxwell.

as it will be about the 20th of next month, when all your *fallow* will be nearly finished, I am hopeful you will agree to this."

Their second child, a daughter called *Jane*, was born this autumn. There were seven children in the family. This girl, and a sister who came next her, died of water in the head at an early age. The fourth child was *Robert*, who was born in 1782. He became eminent as a lawyer, filled several important official positions, and died in 1861. *William*, born in 1784, was a writer to the signet, and at one period crown-agent. He died in 1849. *Benjamin* (1785) died in childhood from choking on a pebble, which he had picked up on the Meadow Walk. *Joseph* (1786), of whom more particulars are given subsequently.

In a letter to his father about this time, he mentions incidentally, that when his severe accident happened and interrupted his professional avocations he had been clearing at the rate of £400 per annum. This seems remarkable progress to have been made in the course of little more than three years; for he commenced practice, as we know, in the summer of 1772, and his accident must have happened some time in 1775. We need not wonder, then,

that after his recovery and the publication of his book already mentioned, he again started with accelerated speed on his successful career.

“*January 14, 1779.*

“What a mercy it is you all escaped in that dreadful storm of the 31st of last month ! A great deal of damage was done here among the roofs of houses, but happily no lives were lost.”

To his father :—

“*February 4, 1779.*

“As you may not, perhaps, have heard a distinct account of the confusion that has subsisted here these two days, with respect to the Roman Catholic Bill, I shall here give you the particulars. You will no doubt have seen the many inflammatory advertisements, from different quarters, which for several weeks they have stuffed our newspapers with, in opposition to that bill. On Monday last several printed hand-bills were found in different parts of the street, desiring all well-wishers to the Protestant cause to meet on *Wednesday* evening, in order to pull down that monument of superstition (an elegant house lately built, for the purpose of a Roman Catholic chapel), at the foot of one of the north closes. This appears, however, to have been intended merely for a deception, for

the mob gathered early on *Tuesday* evening; and although the Town-guard and 400 of the South Fencibles were turned out in an instant, and long before any mischief was done, yet true it is, that even in the face of such a number of armed men, with the magistrates of the place at their head, the furniture of the chapel was first all destroyed, and, not contented with that, combustibles were then got, and fire being put to them, the building in the space of a few hours was reduced to ashes. Several individuals known to be of the Romish faith were afterwards attacked, and next day, in open sunshine, the houses of different people of that persuasion were ransacked, and one woman, a Mrs. M'Donald, used so barbarously, that she and her child, of which she had been delivered only a few days, both died this day. It matters not whether a person be a Protestant or not; if it appears he ever expressed himself in favour of the liberty intended to be granted to Roman Catholics, he is doomed to suffer. Revenge is accordingly vowed against different people upon that score only; particularly Principal Robertson, our countryman Mr. Crosby,¹ and Sir John Dal-

¹ The original, it is believed, of Sir Walter Scott's admirably-drawn character, Mr. Pleydell, in *Guy Mannering*.

rymple. The Principal's windows were yesterday entirely demolished, and if a guard of 100 men had not been placed upon his house during the night, the consequence, both to himself and family, might have been very disagreeable. The great error in this matter has been the want of firmness and vigour in the people in power, on the first appearance of the mob. Much less strength than we had was more than sufficient to quell any mob that could occur here; but the military durst do nothing without orders, and the magistrates were timid in giving them. But it will appear strange to people at a distance to hear that a house was burnt by a mob, and upwards of 400 men in arms looking on, who might easily have prevented it. Sir James Johnston happened to be commanding officer of the South Fencibles that night. He got a hurt with a stone, I hear, but was not materially injured. There are now three troops of dragoons in town, and I am hopeful we may expect to have little more disturbance, although there can be no certainty of it. If anything further happens, I shall write on Saturday."

CHAPTER V.

1779.

WE left "the grey Metropolis of the North" in the midst of popular tumult and unwonted confusion. It is refreshing to read, barely a month later, the following sunny announcement of an early spring, with rural occupations going forward prosperously :—

"6th March 1779.

"Here has been the finest season I ever remember; the work of this part of the country is amazingly forward. There has been no rain here for these four weeks. I have sown all my beans, and I shall have all my oats over next week, if the weather holds good. Beans, and wheat, and potatoes, are the great articles with me. I have sown about thirteen of your bushels, I mean the Carlisle, of each of the former upon land in high order; and I intend to have four acres or so of potatoes, as we have a ready demand for them. The season, indeed, has been

so remarkable, that my bean-land was as fine as any fallow. It got all three furs, and my bear, oat, and potato land has already been all twice ploughed. I have not, nor ever mean to have, many oats—never above three or four acres—as they don't pay, and I use none of them. My horses are in much better order this year than they were last, when they were fed on oats, and they neither have nor will get any this season, as I find beans both a better and cheaper food ; just a third less of beans than of oats keeps them in better heart, and they never taste hay—nothing but beans and pease-straw.”

“ *March 25, 1779.*

“ We have great news here to-day, confirmed by government intelligence, that Destaing's fleet is blocked up in Martinico by Byron, and there is a report, which gets credit, that Campbell's troops are in possession of Charlestown.”

To his father :—

“ *Edinburgh, 13th May 1779.*

“ You think it would have been better to have bought a house than to contract for the building of one. The loss in purchasing one already built is, that all those built for sale are much slighter than they ought to be. And by contracting, one can have every part of the house

laid out to his inclination ; and in the way I do it, I run no kind of risk. A plan is made out of the whole, and the method of finishing expressly mentioned for every article, and a person skilled in building is appointed by me to have the inspection of the whole, and the power of rejecting every kind of material that is in any respect improper, so that I run no risk of being imposed upon. Our situation I like very well ; it is not so airy and pleasant as the new town, but our business would not admit of my going so far out of the way, and this is one of the most open situations in the centre of the town."

This house, which he thus built by contract, was in Merchant Street ; and it would appear that he probably took possession of it at the Whitsunday term, 1780. This is inferred from a postscript in the same letter, added by Mrs. Bell : " I think there is not much room for me to write ; but perhaps my husband thinks that I have not much time. I see he has not told you that we *flitted on Tuesday*—a most material business, in my opinion, well put over. We are very much straitened for room in this house, but as it is only *for a year*, we can make shift to put up with it."

To his father :—

“ August 16, 1779.

“I should like to know your opinion as to the best time of sowing wheat. All the farmers in this country prefer late sowing—viz. any time between the middle of October to the first week of November. But as I had always thought they erred in this point, I last year sowed about three acres on the eleventh of September. I was told by everybody that it would be so forward that it would all lodge, and that it would both be very small in the head and small grain likewise—two faults that they universally suppose must attend early sowing. To the great astonishment, however, of everybody, this very crop, during all the winter, spring, and summer, had a better appearance than any in the country, and now at harvest, it is acknowledged to be by much the best of any in this quarter—a very strong crop, finely headed, and very full large grain. Upon inquiring further into the objection against early sowing, I find none of the farmers speak from their own experience, only that they had always been accustomed to hear that so and so was the case, and none of them accordingly had ever doubted it.”

“Tell Joseph” (who, as we saw, was studying medicine) “that I have not time to answer his

at present, but that all his prescriptions are exceedingly proper for all his different patients. If he goes on at that rate, he will not need to return here for more education."

The following extract, December 27, 1779, indicates that his reputation was growing rapidly:—"If I was not overstocked with apprentices, I should have taken him (his brother William) at once; but I have at present as many as I have business for, and have besides engaged to the friends of three other young men to take them as soon as I possibly can."

The next letter that has been preserved is dated 18th December 1783. It is to his mother:—"Immediately after the cover of Monday's night was sent to the post-office, I was informed of the distressful intelligence which I find you received the following day. We are all, I believe, as much attached to *all* our brothers as is well possible; but there was something so peculiarly attracting in *John*, as marked him for the peculiar favourite of all who knew him. I need scarcely, indeed, take notice of this to my dear mother, to whom his amiable dispositions were so well known, and who will now be lamenting the irreparable loss which we have all sustained by his death. My father writes

in a very affecting manner of it, but I sincerely hope you will all be enabled to bear it with as much fortitude as possible. Different circumstances concur to render it more especially hard upon William; and Becka's delicate state of health will render her more liable to be depressed by it. It will therefore require particular attention on their parts, as it will indeed do with my father, you, and Ann, to guard against the effects which are sure to occur from much indulgence in those feelings which such an occurrence is sure to induce. I need not tell you that the shock we all suffered on this occasion was very great, and I believe none of us felt it more sensibly than Mrs. Bell, for she was highly interested in everything relating to our dear John. James and Joseph and she, however, will bear it, I hope, as they ought to do. Mr. Corrie's family too have felt much on this occasion; but this must be the case with all whom John was known to. For a long time I was under much anxiety for John, on account of the climate, but of late, as he had now been so long accustomed to it, and had kept his health so well, I had little uneasiness on this score, and had wrote him, indeed, not above a fortnight ago, to remain on the coast rather than go

into the hazardous trade again, in which he had been so long engaged. A few years, I was in hopes, would have sent him home to part with his friends no more. All our views of this nature, however, are uncertain, and most apt to be thwarted when we have the least reason to expect it. There must be some good reason for such trials being destined for us. I wish we may be directed to apply them properly. It was extremely attentive in our aunts to think of being with you at this time. The stay of the two Mrs. Gilchrists could not be long, but I hope Miss Corrie will remain some time with you. You will all be greatly the better of her; for although I know her to be possessed of very fine feelings, I know few so capable of affording comfort and consolation to others in circumstances of this kind."

He then alludes to a change which was contemplated in his brother Joseph's future plans. An offer had been made to him to go abroad by a Dr. Drummond, who was ready to take him into partnership along with two other young men—John Graham and a nephew of his own. Benjamin expresses great disappointment at the thought of losing Joseph; but thinks that it

would be improper and dangerous to use any strong arguments to dissuade him.

There are no letters preserved betwixt this period and December 1789. But we know from other sources that Joseph, of whom he had evidently formed a high opinion, and to whom he was greatly attached, carried out his intentions of going abroad, and died there in 1786. He was, by all accounts, a most promising young man, and his brother had anticipated much satisfaction from having him as a partner in business. On the 25th of November 1786, as already mentioned, his own youngest son was born, and received in due time the name of *Thomas*; but, when the news arrived of his uncle's death, that appellation was given up and *Joseph* substituted for it, in affectionate remembrance of the deceased. The family resided at that time, and had done so, as formerly mentioned, for some years, in the house which he built in Merchant Street.¹

¹ It is always a delicate matter for a son to draw the character of his father, but the writer feels that he cannot with propriety evade making the attempt on this occasion. After a thorough grounding under Mr. Stalker, an eminent teacher of English in those days, Joseph Bell became a pupil of Mr. Christison, then one of the classical masters in the High School, and subsequently (1806) the distinguished

In a note to his brother Archibald, then (19th January 1784) residing temporarily in Ironmonger Lane, Cheapside, London, after giving Professor of Humanity (*literæ humaniores*) in the University of Edinburgh. In Mr. Christison's class he had among other competitors the late Sir George Clerk, Alexander Simpson (minister of Kirknewton), William Paul, and Robert Paul, but he was at the top of his class on the examination day of each of the four years. The same success attended him in the Rector's class under Dr. Adam, and he would have carried off the gold medal, had it not been that he preferred accompanying his father and mother on a long tour through England, which the former found it necessary to take that summer for the sake of his health. It was alleged at the time that Joseph, being a very modest youth, was only too glad to escape from the Latin farewell address which the dux of the whole school was expected to make to the rector, and to resign both it and the medal to his friend and playmate George Clerk. After leaving the High School and attending the literary and philosophical classes in the University—then taught by John Hill, Andrew Dalzel, John Playfair, John Robison, James Finlayson, and Dugald Stewart—he was apprenticed in due time to his father's partner Mr. Russell, and entered enthusiastically upon the study of medicine. He attended the prelections of the many eminent men who then maintained the reputation of the Edinburgh school, including Hope, Monro, Gregory, and Barclay, and for several years enjoyed the advantage of his father's direction and guidance, besides those of his brother George, who had attained already considerable experience as a surgeon. In 1807 he repaired to London, where he resided under the hospitable roof of the late Mr. Thomas Blizard of the London Hospital—of whom we have

some instructions in regard to the affairs of poor John which required to be wound up, he concludes with the following reference to his already said that he was one of the best practical surgeons of his day, and a great enthusiast in his profession. After enjoying many excellent opportunities of acquiring knowledge, among which he always reckoned the lectures of Sir Astley Cooper at Guy's Hospital and those of Mr. Abernethy at St. Bartholomew's, Mr. Bell returned to Edinburgh in 1808, and immediately settled in practice as assistant to Mr. Russell.

In this capacity his hands were fully occupied from the first, and he soon proved himself a very efficient and trustworthy practitioner. Although always ready to operate on surgical cases when they occurred, and well qualified for doing so both by education and the coolness and self-possession of his natural temperament, circumstances led him chiefly into the medical department of the profession, in which, for many years, he maintained a prominent and honourable place. As assistant to his brother, who, as we have seen, stood very high as an operating surgeon, Joseph Bell saw a great deal of surgical practice, and often exhibited the highest qualities which such duties require. No man had a steadier hand, a calmer mind, or greater neatness in all those manual proceedings of which even non-professional persons can form an opinion.

Although naturally of an amiable disposition and always remarkably unselfish, he had great firmness of character, and was one of those men with whom one felt instinctively that it was impossible to take liberties. Throughout every period of his life he maintained a character of rare moral excellence and propriety ; but it was not until 1821, after a season of severe domestic trial, when he lost two children in one week

brother-in-law William Hamilton. He was the Professor's eldest son, had gone out to India in the civil service, and returned with an ample fortune. "If you need any advice in John's matters, you cannot apply to a more proper person than Mr. Hamilton, on whose honour and integrity in every piece of business you may have occasion to transact with him, you may rely with implicit confidence."

To his father:—

"7th December 1789.

"I approve much of a tombstone being put up in Middleby Churchyard to my grandfather and grandmother. If the burying-place is near a wall, I would prefer a plate of white marble, and I shall be at the expense of it. The more simple the inscription the better. If it is not

from diphtheria, that the religious earnestness which afterwards distinguished him began to appear. His natural dispositions were from that period sanctified by divine grace, and for seven-and-twenty years he was an eminent example of what Christianity can accomplish in making a man useful and exemplary in his day and generation. Mr. Bell married early in life, and had five children, three of whom still survive. He died on the 21st of January 1848, after a fever of eleven days' duration, caught from a poor family in the performance of his double duty—medical attendant and an elder in the Established Church.

near a wall, a common gravestone, neatly done, may be more proper."

"You will let me know annually when a demand is made upon you for the chaise-duty, as I must insist on paying it, from having been the sole cause of the expense being incurred for it. I meant to have filled the sheet, but a call to Kelso, where I must go to-morrow to perform an operation, will keep me hurried during the remainder of this day, and it is the less necessary as Ann, who is writing, will be more particular."

The following letter to his father is conclusive evidence as to the successful career which he was now running. Ten years previously he had been, as we saw, in straitened circumstances and threatened with increasing debt. Now, he is again moving into a larger house and has purchased a considerable estate. It is worth noticing, in connection with this rapid progress in professional reputation, that his "System of Surgery," the first volume of which appeared in 1783, or rather, in a somewhat different form, in 1779, was by this time completed in six volumes. It was much esteemed by the profession, passing through seven editions in thirteen years, and doubtless exercised a con-

siderable influence in establishing his reputation as an operating and consulting surgeon.

March 18, 1790.

After inviting his parents to visit him in the *new house* which they were soon to enter, he goes on to tell them of a more extensive transaction which he had lately completed. The new house referred to was in Nicolson Street, immediately to the north of the present Hall of the College of Surgeons. It is now occupied, at least the floor next the street, by the Messrs. Dymock and Guthrie as their place of business.

“The estate of Hunthill, belonging to a family of the name of Rutherford in Roxburghshire, is about a mile from Jedburgh. The price is considerable—about ten thousand pounds. While the present leases subsist, my income from it will be considerably less than the interest of the price; but, as it is a most improvable subject, I have every reason to think that it will, at next set, rise to something considerable. I do not go upon my own opinion. *James*¹ (his brother) was out viewing it, and I got the opinion and advice of two of the most

¹ Mr. James Bell, whose name has repeatedly appeared in this memoir, settled eventually in Leith, and became a successful corn-factor and wine-merchant. He, at the same

respectable farmers next to the grounds, and they all concurred in advising me to take it at the price. There are about 1100 acres, of which 700 are good land. The rest is moor, moss, and wood. The moss in that neighbourhood is valuable. There is a house upon it, which, within these fifteen years, cost £1500; and the wood is valued at £900 or £1000. The present rent is £340. The valuation affords nearly two freehold qualifications.

“As my line of life puts it out of my power to live upon it, it is merely with a view to its proving of advantage to my family in future that I have bought it; and I have no doubt of its ultimately doing so, and at present I can luckily bear the difference.”

The next letter of the series from which we have been drawing was written after an interval of two years. It opens up the particulars of a still more important transaction into which he appears to have entered. It is impossible now to say whether or not the scheme was really carried out; but the preliminary documents time, continued as a tenant of the Duke of Buccleuch in the farm of Woodhouselees so long occupied by his predecessors, and attained to eminence both as a cultivator of the soil and an improver of live stock. He died, greatly respected, in 1832, at the age of seventy-four.

illustrate both the capacity of the man for business and the confidence reposed in him. If the bargain was concluded, it is probable that the property in Grenada was again disposed of in a few years; for his brother *William*, with whom he was to be associated in the undertaking, died so early as 1795. The two communications which follow are somewhat lengthy; but we do not hesitate to print them, because they exhibit the subject of this memoir very favourably as a man of vigorous intellect, knowledge of affairs, and courage at once in planning and executing his schemes.

“ 18th *March* 1792.

“ I do not wonder at your being anxious to hear about *William*, but till now I could say nothing to the purpose, and therefore judged it better to say nothing. The history of this concern, which *William* writes you that I had proposed to him with a Mr. Campbell, is this:— A Mr. James Campbell, who came over in the same ship with *William*, sold an estate in Grenada, of the name of Maran, in the month of June last, to a young man, a relative of his own, son to a Mr. Mungo Campbell, now of Edinburgh, and a great proprietor still in Grenada, where he made a handsome fortune. This young

man, Alexander Campbell, gave one-half of the concern to a Mr. Mark Campbell, also a relative of his own, who was to remain as manager upon the estate—he, the said Alexander Campbell, being obliged to come and reside in Glasgow, where he is partner in a considerable mercantile house, under the firm of John Campbell senior and Company. This John Campbell is brother to Mr. Mungo Campbell, and consequently uncle to Alexander. By the packet of January accounts came of the death of Mark Campbell. This induced me to imagine, William being then gone, that Alexander Campbell might wish to have a partner for the estate in Grenada, and that it might suit him to be connected with William. I therefore took the first opportunity of conversing on the subject with Mr. Mungo Campbell, whose family I attend. All that passed was, that at first view of the matter, he thought that it might be a connection that should prove advantageous to both parties, for he had seen William, as I took care to have him introduced to him when here as a West Indian proprietor. This I mentioned to William, which gave rise to his account of the matter to you. No more passed till about a fortnight ago, that Mr. Mungo Campbell asked me if William

had got anything done by his journey to London. I said that he had not, at which he seemed very well pleased, and said that he hoped something might be done more to the purpose in that matter which I had mentioned to him, than if he had engaged with anything else, but that he could say nothing further until he should see his son, whom he expected in a few days. About eight days ago his son came to town, when we had different meetings about it. At the first of these Mr. Mungo Campbell observed, that he came to the resolution of causing, or rather advising, his son to part with the whole property in Grenada, and he gave me very substantial reasons for his doing so. The young man himself is in a very profitable business at home. He, Mr. Mungo Campbell, has property still in Grenada to the value of £60,000 sterling, and this Alexander being one of two sons, and there is only one daughter, he saw no reason why he should be perplexed with any further concern than that of his own business, and therefore he was clearly of opinion, now that his partner was dead, that he should dispose of the whole, and he advised him to let William have it exactly on the terms on which he himself bought it. This was likewise agreed to by the son; but the

object for William being far beyond what we had any views of, I hesitated for some days upon this, when at last I came to a resolution, which perhaps may surprise you—that of taking one-half myself. This, however, I have done, and my reasons for it are these :—I thought, in the first place, that my having a half in the concern would be serving William more than getting a stranger to take it. With me he will have the full direction and management; everything will be done in his own way; whereas a stranger might not have been satisfied with this, and might, in all probability, have wished to interfere in the management. In the next place, I considered this as a favourable opportunity of getting a connection, which ultimately might prove an easy method for providing for one of my sons. We daily meet with people, even in the best circumstances, who, from want of opportunities and connections, are reduced to the greatest distress and difficulties in getting proper appointments for their children. This, if it succeeds, will make a very beneficial one for one of ours. If it fails, I shall be sorry for it, not merely on my own account, but more particularly on William's, whose dependence on the success of it is greater. I mean to advance £1500, in

order to carry the proposed purchase as quickly as possible to its utmost degree of perfection. This will be of material service to William. No doubt it will be at my hazard, but if it succeeds, I shall be repaid for it; and if, unfortunately, it shall happen to fail, I shall at least have the consolation to think that I had done all that could be expected of me in promoting a favourite scheme of one of my brothers. I must, before going further, however, desire that you may not mention my connection in this matter. My chief reasons for this are, that, in the first place, any idea entertained by the public of my having the view of speculating in such matters, might affect my credit in money matters; and, in the second place, it might affect my business, were it supposed that I engaged so deeply in money concerns to such an important amount. The fact is, that I shall only bring the sum of £1500 into hazard. If the scheme succeeds, as I have no doubt of its doing, both William and I will be great gainers. If it happens to fail, I shall no doubt regret the loss, chiefly, however, on William's account; for the sum of £1500, although it will lessen my capital considerably, still it will not be an irretrievable loss, either to myself or to my family.

It will only cost me a year or two more of drudgery, such as I have now been long accustomed to.

“My proposals to William are, in the first place, that he shall not engage in the concern, if he is not perfectly satisfied, after the most mature deliberation, of its being for his interest; and you will see by the copy of a letter, wrote to him of this day, and which I now enclose, that I have done everything in my power to guard him against a hasty transaction; and, besides this, I have of this date written in the fullest manner to my friend Mr. M’Kenzie, now Attorney-General for Grenada, desiring his friendship for William in this matter, not merely in seeing the necessary deeds of conveyance properly executed, but in advising him, in the first place, upon the propriety and safety of making a transaction of such importance.

“On the supposition of this being judged an eligible concern for William, I have, in the second place, said, as I have hinted at above, that I shall advance, as may be needed, £1500 for completing and carrying on the works upon the estate to the greatest possible advantage.

“3d. That William shall have the entire

management of the whole, for which he shall receive annually whatever is given for the management of estates in a similar situation. As I have heard him say that his allowance of £200 sterling per annum from Mr. Hume is as much as is given by any in the island, I have said that his allowance shall be £200 ; this to be continued till all the debt is paid off, when, instead of £200, he shall receive £400 per annum.

“ 4th. This allowance to William, and the necessary expenses for the support of the estate, being first deducted, the overplus to be entirely applied to the extinction of the debt incurred by the purchase, the terms of which you will see by the enclosed copy of Mr. Campbell’s letter of the 16th from Glasgow. And lastly, after all the foresaid debt is paid, the clear profits to be equally divided between him and me, or between him and any of my sons whom I may incline to put into that line of life.

“ I have also provided, that if either of the partners shall, at any time, wish to dispose of his share in the concern, the other shall have the first offer thereof, at the price which is now paid for it ; any melioration that may in the meantime happen, either in the estate itself, or

in the negroes or works, to be allowed for, and a deduction to be made in proportion to whatever may be rendered worse than it now is.

“ In short, I have done all that was in my power, in the first place, for providing what I judged might be agreeable to William, and in the second place, for rendering the connection a mutual advantage to us both. Without my interference, nothing of this kind could ever have occurred to him, and without his attention and superintendence of the business in Grenada, I could never have thought of engaging in such a business ; so that, in some respects, our obligations to each other will be mutual. Besides the most earnest entreaty to William of his not engaging in this business if he does not get the most favourable opinion of it from such intelligent planters as he may consult, I have written, as I have already observed, in the strongest manner to Mr. M'Kenzie, to the same purport, and likewise desired him to write me, by the first packet, what his opinion upon it may be ; and I conclude that he is already well acquainted with the business from his having been engaged by both the buyer and seller, Mr. James and Mr. Alexander Campbell, not only to make out the conveyance from the one to

the other, but to settle any differences that might have occurred between them."

The following letter, written on the same day to his brother William himself, conveys a very favourable idea of the writer's business talents and clearness of apprehension :—

"DEAR WILLIAM—I wrote you very fully by the post of yesterday, to which I refer. The letter was directed to the care of our friend Mr. M'Kenzie. Finding that a letter wrote this day will still reach the packet, I think it right to drop you a few lines upon the same subject with my letter of yesterday.

"Engaging in an object of such magnitude as the purchase of an estate of high value always is, requires, as you well know, the utmost attention and deliberation. In my letter of yesterday, I said that you should by no means depend upon your own opinion in a matter of such importance. You ought to do as we do here in similar matters. When I purchased Hunthill, I did not so much as allow my opinion to have any influence, for I did not see it till after the purchase. I got James first to go by himself and view it, and afterwards he employed different well-informed farmers to give each their opinion separately, and without

communicating with each other. You ought just to do the same, and to get the opinion of each planter you employ, not merely of the value of the estate, negroes, and works, but of the probable price of produce for some years to come.

“I need scarcely observe that the present state of the negroes and of the works are objects of the first importance. If either of these articles are in bad order, you must not only consider the value of what may be necessary to repair them, but in what manner the money is to be obtained for that purpose. I have mentioned in my letter of yesterday the length that I can go—viz. £1500; but even that sum added to the original price will increase the height of it greatly. Perhaps nothing of this kind may be required. I understand, however, that it has been in contemplation to build a separate set of works upon some part of the grounds, for which the present buildings do not answer; and also to cut a canal for the purpose of obtaining a more complete supply of water than they have at present. You will therefore consider the import of these matters with the greatest possible attention, and if they are either now requisite, or may hereafter be so,

you will add the expense which they may incur to the price now to be given for the estate, and, after all, determine with yourself and your friends whether the whole will be worth what they are to cost or not. After proceeding in this manner, if you and your friends are satisfied that you may with safety engage in the bargain, I would by all means advise you into it, as the terms upon which you are to get the accommodation are in every respect favourable; but neither this nor any other consideration should tempt you to engage in it if the least degree of doubt occurs about it. These times, you know, are in many respects hazardous for entering upon West India purchases. All the risk lies at the door of the purchaser. If you buy upon the prospect of sugars continuing high, and if they fall, all the loss must be sustained, not by the seller, but the buyer; and at present administrations are certainly employed in devising some means from preventing sugars from getting again to such a value. You will easily make yourself master of what this estate has produced, I mean the number of hogsheads of sugar, etc.; but in valuing these, you will go far wrong if you fix upon prices anything equal to what they now are—at least this is the

universal opinion here. As you are, I believe, a very good planter, you will be apt to suppose that, by much exertion and industry, you may bring the estate to yield more than it has hitherto done. No great weight, however, should be laid upon any consideration of this kind, as at best it can only be founded upon conjecture, and, besides, nothing should be allowed for it to the person selling. All advantages of this nature should exclusively belong to the purchaser.

“In every part of the transaction Mr. M’Kenzie’s advice will be of use to you, but particularly in what relates to the writings and conveyances, which you will necessarily trust to him entirely. There is one point to which Mr. M’Kenzie’s attention and yours must be drawn, the copartnery which subsisted between Mr. Alexander and Mr. Mark Campbell, and whether Mr. Alexander Campbell has an undoubted right to convey the whole property without the concurrence of the heirs of Mark Campbell. As Mr. Alexander Campbell says that he has this right, I believe that it is so; particularly as Mr. Mark Campbell, he informs me, left him his sole heir; but as dispute upon this point might afterwards be productive of

much embarrassment, it will be necessary to have it minutely inquired into. In the terms which I transmitted in my letter of yesterday, from the house of Campbell & Son, of Glasgow, nothing is said, I believe, of the interest the money is to bear, but I got it fixed to be the same that Mr. Alexander Campbell was to pay—viz. 5 per cent.

“ You will observe, the season at which you enter upon the property is not the most favourable; being just at the end of a crop, you can have no return for your money and trouble for at least eighteen months. That is, you cannot, during that period, bring anything to market, while the interest of the price is all along going on. This, upon such a sum, adds about £1800 to the amount of the purchase.

“ In my letter of yesterday I mentioned the propriety of your saying nothing to any of your intended purchase, until it is ultimately determined whether you are to have it or not, as in every respect it is better that no such intention should be known, if you are to remain in your present situation, and which you will undoubtedly do, if your friends and you are not clearly of opinion that the property you have in view is an object you ought to engage in. I shall

expect to hear from you by the first packet, and you will take care to be particular in your accounts of what is done in this matter. If you make a transaction, you may mention everything that you think will be agreeable to our father to know of it :—the extent of the grounds—state they are in—number of negroes—nature of the works—amount of the produce, etc.

“ All here join in best wishes for your health and happiness, and I remain, dear William, your very affectionate brother,

“ BENJ. BELL.

“ *P.S.*—Lest our friend Mr. M’Kenzie and you may not immediately meet, I have left this open for his perusal, to be transmitted by him to you. You will reimburse him for postages.”

It may be mentioned in connection with these extensive purchases,¹ that Mr. Bell was proprietor, for a good many years, of an estate of more than 500 acres in the neighbourhood of

¹ Benjamin Bell’s energy and inclination for bold speculation may be traced, perhaps, to his relationship to William Paterson, the founder of the Banks of England and of Scotland, and the originator and chief promoter of the “ Darien Scheme.” His sister, Jean Paterson, was mother of James Corrie, Anne Corrie’s father ; so that William Paterson was Benjamin Bell’s great-granduncle.

Melrose Abbey, and that, at the time of his death, he possessed the greater part of that suburb of Edinburgh which goes by the name of Newington. During the whole of his active life, he kept up a familiar acquaintance with agricultural pursuits; and being a great economist of time, he was able, busy as he was with his professional duties both as a practitioner and a voluminous author, to publish various essays on agriculture and cognate topics, which even yet will amply repay perusal. The earliest of these essays appeared in 1783, and they were printed in a collected form early in 1802.

This volume (pp. 537) embraced the following topics :—I. The Taxation of Income. II. The National Debt; the Funds; and the Sale of the Land tax. III. The Improvement of Agriculture. IV. The Scarcity of Provisions and Dearth. In an appendix was reprinted a memorial which he had sent to Government in 1783. This pointed out a plan for obtaining an accurate account of the population of Britain, together with a survey of the whole kingdom; the quantity of corn sown annually, distinguishing one kind of corn from another; the number of horses; together with such information on other points as might furnish more certain data

to those who enter on the study of political questions than heretofore it had been possible to procure.

He mentions that the receipt of the memorial was politely acknowledged ; but nothing being done to carry the views that it contained into effect, he judged it to be a fit opportunity for stating them once more, when a proposal was made in the House of Commons for numbering the people in the year 1800. This was accordingly done in the month of December of that year. He then gives the substance of these two memorials. The paper cannot be read without conveying a strong impression of the author's *foresight* and wisdom as a political economist. It is interesting to know, as we learn from the preface to his volume of collected essays, that most of his views met with the approval of Dr. Adam Smith, at whose earnest desire he consented to lay the whole of them before the public. Dr. Smith died in July 1790 ; but, as already mentioned, the essays did not appear for some years after that event, and not in their collected form until 1802. They contain many important suggestions, which show how much our forefathers needed instruction upon such topics at the close of last

century and at the beginning of the present. A few short quotations may be permitted in illustration of this remark.

P. 43.—“The fact is undoubted, that the high assessments which in this country have, from time to time, been placed on windows, are not only giving a check to the progress of architecture in this country, by making it an object of importance with the inhabitants to lessen the number of their windows, and thereby divesting their houses of one of their greatest ornaments, but if not speedily lessened or removed, it must tend to *generate disease, and to produce a less vigorous population* than that for which our island has hitherto been famed. So far, indeed, has the effect of this excessive tax on windows gone, that in house-building the first direction now given to an architect is that there may be few windows; or, in other words, that our houses must be deprived of that portion of light and air which the inhabitants ought to possess, without which they can enjoy neither comfort nor health, but of which they must in a considerable degree be deprived, as long as this very pernicious tax is, in any considerable degree, permitted to exist.

“In a particular manner this requires the

attention of Government at present, when, by the crowded state in which the lower class of manufacturers live, in all our large towns, the *most baneful fevers are not only daily arising among them, but the infection thereof is so easily propagated, that nothing but the greatest attention to cleanliness and a free command of pure air* in the houses of the more opulent, can prevent the hurtful effects of it to them and their servants, as well as to every class of the community."

His views in regard to the *corn-laws* were certainly in advance of his time :—

"Let every statute be repealed that has hitherto been continued against dealers in corn and other provisions ; let all who deal in them be protected, and permitted to purchase and sell in all situations and circumstances, and whenever they may think proper ; and the business will be done. When this shall happen, and the period is not probably distant, it will soon become matter of surprise and wonder that any of these pernicious statutes were continued till the nineteenth century. They will be considered as the more remarkable, from being kept in force by the people of Britain, who have long been convinced of the utility of freedom of trade in

every other article, and hereafter will be spoken of in the same manner with all statutes that authorise persecution, where full liberty should be given." (P. 367.)

The following is almost prophetic of railways, a generation before they were introduced:

"In like manner, if the corn and cattle markets of London, Edinburgh, Liverpool, and other places of large demand, were supplied by a greater number of merchants possessed of larger capitals, the same consequences would follow; in that case, they would daily obtain supplies from the most distant corners of the kingdom, instead of receiving a large proportion of the whole, as they now do, from the contiguous districts. Larger quantities would accordingly be sent to them, *and by new modes of conveyance, which competition, supported by sufficient capitals, would not fail to invent.*"

The census of 1801, the first for several centuries, showed that the actual population of Britain was 10,764,591. It is interesting to know that Benjamin Bell in the previous year had come to the conclusion, from various facts which he had collected and compared, that the

number would be found to be about twelve millions.¹

During the greater part of his active life he wrote much on professional subjects. His first publication was a case of epilepsy in the *Edinburgh Medical Commentaries*, so early as 1773. His latest was the seventh edition of his *System of Surgery*, in 1801. This was a book in seven volumes octavo, and first appeared betwixt the years 1783 and 1788. That so many editions should have followed each other during the short period of thirteen years, proves that it met the wants of the time, and stood high in the estimation of competent judges. We shall not enter into its merits here, or enumerate his other works on special departments of surgery; but, for obvious reasons, shall postpone what we have to say upon these subjects to an appendix.

¹ It may be mentioned that he had occasion frequently to correspond with William Pitt on questions of political economy. This circumstance and his professional eminence combined may account for the offer of a baronetcy, which he is known to have received, and to have respectfully declined.

CHAPTER VI.

1792-1806.

MR. BELL'S life, during the years that followed the correspondence from which we have quoted so largely, appears to have been devoid of incidents worthy of being recorded. We have seen that, besides being fully employed and eminent in his profession, he took an intelligent and warm interest in public questions and the common welfare. As years rolled on, he rose steadily in the estimation of his countrymen, and was very extensively consulted in cases of professional importance and difficulty. This implied a great many journeys to a distance, at a time when locomotion was much more tedious, fatiguing, and troublesome, than it is now. It shows how active and persevering his mind must have been, to enable him to write so many books in the midst of so much arduous employment, and so many unavoidable interruptions. We have heard it mentioned, that as his journeys

were often necessarily performed after dark and during the night, he had an oil-lamp fixed inside the carriage, so that he could read and write as he travelled.

We saw that for a few years in early life he was in partnership with Mr. Gibson. At a later period, Mr. James Russell¹ and Dr. Andrew Wardrop² were associated with him, and continued so until the time of his death in April 1806. His eldest son, George, having completed his education and become a Fellow of the Royal College of Surgeons, also joined the copartnery in 1798.

In spite of the able assistance which he derived from these various sources, he began, at a comparatively early period of life, to feel the pressure of his arduous duties, and found it absolutely necessary, for several years, to make prolonged journeys into the southern parts of England for the sake of his health. These, in which his wife and one of his sons accompanied him, were turned to a useful purpose, as we have already seen, in observing the agriculture of the counties which he visited, and accumulating information of all kinds connected with

¹ James Russell, F.R.C.S.E., 11th July 1777.

² Andrew Wardrop, M.D., F.R.C.S.E., 28th Nov. 1777.

his studies in political economy. In the course of one of these journeys, we believe in the year 1798, having arrived at a large town on the English coast—probably Harwich—they were greatly astonished by a crowd of sailors unloosing the horses and themselves dragging the postchaise in triumph. It turned out that the worthy fellows, many of whom had served under Admiral Duncan, whose recent victory of Camperdown rendered him the idol of the day, having learned somehow or other, that Mr. Bell had been the means of restoring him to health by a surgical operation, took this rough and ready mode of testifying their satisfaction.

Mr. Bell's infirmities gradually increased, although he was still not much beyond middle life; and in 1804, as we learn from a letter addressed to one of his family, he had become so feeble that a few professional visits each day were all that he could accomplish. In February 1806, there is a note appended to a statement of his affairs, in which he mentions his purpose of taking a journey to Cheltenham and Bath for the improvement of his health. Mrs. Bell and his youngest son, Joseph, now in his twentieth year, were to accompany him. This

journey never took place. The carriage was at the door when his weakness compelled him to abandon his plan. What the precise nature of his illness was it is impossible to say; but it was accompanied by a complete failure of appetite. It is said that one day the late eminent Dr. James Gregory, who was in attendance along with other medical friends, entering his room, observed the patient muttering to himself, and supposing that the mind had begun to give way, turning to the rest, pointed significantly to his own head. "What were you saying, sir, when we came into the room?" "I was praying, Dr. Gregory, that you might all be forgiven for pressing a poor man to eat when he is totally unable."

No particulars are preserved of the closing scene. He died at Newington House, where he had resided for some time, on the 5th day of April 1806.

Very few individuals who were personally acquainted with him, or who were old enough at the time to form an estimate of his character and position, now survive; but the writer has possessed many opportunities in past years, of forming a very decided opinion as to the high place which Mr. Bell must have maintained in

the confidence and respect of his contemporaries. He appears, from universal testimony, to have been one of those men whose self-reliance and firmness of character command the confidence of others—a confidence which is strengthened and secured by accumulating evidences of integrity and friendly feeling. Although the same view of him might be formed from an unbiassed perusal of his works, Mr. Bell evidently occupied a position of greater weight and influence than these perhaps would readily suggest to a reader in the present day. For, although replete with important matter and very creditable to him as expositions of the surgery of his time, they are not remarkable for terseness or elegance of expression; and, in these last respects, will not bear comparison with the writings of some other men who, *during their lifetime*, failed almost entirely to secure the confidence and respect of the general public. There is nothing wonderful in this. It is quite possible for men to write brilliant books, which may be read with interest and approbation by succeeding generations, and yet to have comparatively little power of securing the confidence of those among whom they live and practise their profession. Others, again,

have personal qualities which irresistibly inspire their fellow-men with *a belief* in their capabilities and trustworthiness. It is a belief which strengthens while they live, and may be understood or imagined by those that come after them—if haply they were at the same time gifted writers,—but which, otherwise, will pass out of memory with the men among whom they lived and laboured. Mr. Bell belonged to this latter class; because the unanimous testimony of those who personally knew him proves that he stood much higher, both actually and relatively, among the practitioners of his own day, than can be easily inferred *now* from a simple perusal of his writings.

In corroboration of this opinion, I may state that a respected Fellow of the College of Surgeons, Dr. John Campbell, who died not long ago at the advanced age of eighty-three, and was in his youth an apprentice of Mr. Bell, told me that in comparing notes with one of his contemporaries, they agreed in making the remark that at one time nobody thought he could die contented without having consulted Benjamin Bell.

In this connection, the following letter from a venerable and distinguished member of the

profession still living (Mr. James Wardrop¹ of London), will be read with interest :—

“ Being educated with my uncle Dr. Wardrop, and residing with him until I went to London in the twenty-seventh year of my age, I had ample opportunities of becoming acquainted with Mr. Bell’s professional endowments, and of appreciating the high character which he had attained. My personal knowledge of Mr. Bell began about 1796. He then filled a most distinguished position as a surgeon and medical practitioner, and so onerous had his avocations become, that it led to his forming a partnership with Dr. Wardrop and Professor Russell. For not only was Mr. Bell greatly employed in Edinburgh, but he was sent for to many distant parts of Scotland and the north of England in cases of urgency, so that the partnership he had formed enabled him to leave his Edinburgh patients under the care of able practitioners until his return. Mr. Bell’s fame may be said to have arisen chiefly from the professional works he had published. A chronic ailment with which he was afflicted early in his professional life, and which confined him to the house

¹ Author of an *Essay on Fungus Hæmatodes*, *Essays on the Morbid Anatomy of the Eye*, and other valuable works.

for a lengthened time, induced him to employ his leisure hours in writing his well-known *System of Surgery*, and the seven volumes formed a copious and lucid treatise which became the *text-book of the Edinburgh school*, was translated into foreign languages, and was generally esteemed by his professional brethren.

“In addition to a comprehensive medical education, Mr. Bell possessed qualifications to fit him to become a skilful practitioner. His manner was devoid of every kind of affectation—simple and unostentatious. He was of a kindly disposition, and in stating his opinions made use of plain but very accurate language. He had an impressive mode of expressing himself, giving great assurance and confidence to the sick. In all the excitement of surgical operations he displayed the greatest composure. He was a successful operator, and, during many years, was more employed than any other surgeon in Scotland.

“Never shall I forget, and often have I repeated to others, the advice he gave me on first entering into life. I was then twenty-three years of age, and having been admitted into the Royal College of Surgeons was employed as a junior member of the copartnery. Mr. Bell

invited me one evening to his house. In the midst of some admirable remarks he observed : — ‘ Be not afraid of your ultimate success. I have never known an instance of any one, in any profession, who did not succeed, if he was sufficiently qualified, of industrious habits, and honourable in his conduct towards those who employed him.’

“ Nothing is more interesting to a young practitioner than to have an opportunity of hearing different practical men state their opinions to patients. Well I recollect the impressions Mr. Bell’s statements always made, and, except those of Dr. Monro the second, all their professional brethren were wanting in the simplicity and accuracy of these two able men, both of whom addressed their patients and expressed their opinions in the most distinct and appropriate language. Medical men in these respects may be compared, not inaptly, to lawyers. The condensed language of the judge, in reviewing a case, forms a striking contrast with the long and verbose harangue of an advocate. It may here be remarked that there was a great difference in the manner of Dr. Gregory, and in that of Mr. Bell and Dr. Monro.”

These testimonies of Dr. John Campbell and Mr. Wardrop to the eminent position of Mr. Bell, are borne out by the statements of many other competent contemporaries whom we have conversed with in former days. They were unanimous as to the weight of his character, the value attached to his opinion as a consulting surgeon, and the confidence reposed in him as a skilful and dexterous operator. His professional writings indicate great clearness and precision in his own views, and his instructions are habitually delivered with an accurate attention to details. We can readily believe, therefore, that his intercourse with patients must have impressed them with the conviction that he thoroughly understood his business both in theory and practice.

In addition to qualities which inspire confidence, he possessed others which could not fail to attract and retain. His manners were those of a gentleman, and we have heard it frequently remarked, that with great stores of information on most subjects he had the art of always appearing to derive instruction, rather than to give it; so that those with whom he conversed, instead of being made uncomfortable, were left pleased and satisfied with themselves. Another

recommendation in his favour was, that he never seemed to be in a hurry, but bestowed as much attention upon each of his patients as if he had no other to occupy his thoughts.

From all that we have gathered in the course of our inquiries, it is evident that the subject of this memoir was a very estimable character in all the relations of life, and by his usefulness as a citizen occupied deservedly a high place in the estimation of his contemporaries. He lived at a period of our history, when it was less common than now for men to converse, or to proclaim their personal convictions, on spiritual topics; so that when they did, it was an indication of earnestness beyond what was usual, and when they did not, their silence could be justly attributed neither to unbelief nor to indifference. If, therefore, we have not met with very decided manifestations of strong religious sentiment on the part of Mr. Bell, we are not shut up to the conclusion that such did not exist. He was, as we saw, the son of an excellent and devout mother, to whom he was deeply attached. She survived him for many years. Can we doubt, that during his whole life, she followed him with her prayers and exhortations? Let us cherish the hope and belief that his many ex-

cellences of character and his estimable demeanour were built, in great measure, upon the only sure foundation—faith in Him who is at once our substitute, our surety, and our example.

APPENDIX.

I.

I AM indebted to my friend Sir P. M. Threipland, Bart. of Fingask and Toftingall, for the following notice of his grandfather. It possesses additional interest from the light which the concluding note throws upon some points connected with the attainders of last century.

“Sir Stuart Threipland, son of Sir David Threipland of Fingask, was born in May 1716, about the very time when his father was deprived of his estate from having espoused the cause of the Stuarts in the preceding year. He was among the first to join Prince Charles Stuart on his raising the royal standard in 1745, and ever after continued his faithful and devoted adherent throughout all his wanderings in Scotland, and escaping to the Continent rejoined him there. On the act of indemnity being passed, by which the proscribed Jacobites were permitted to return to this country, Sir Stuart took advantage of it. Although the youngest of eight sons, having inherited property by his mother, he, in 1782, at the sale of the properties which had been forfeited sixty-six years before, bought back the estate of Fingask. Ten years before this he filled the president's chair of the Royal College of Physicians in Edinburgh ;

but he does not appear to have been in active practice, although visiting and being consulted by his Jacobite and old acquaintances, more in the capacity of a friend than of a practitioner. He had a great taste for the fine arts, and his income being ample, gave him the power of doing acts of kindness and charity, and promoting many in the world who were less fortunate than himself. He attained the great age of eighty-nine.

“*Note.*—After the forfeiture of the properties in 1715-16, Government, for a few years, *let* off the estates, and it became not unusual for the neighbours and friends of the *ousted* proprietors to take leases of the estates in their own names, and then *sub-let* them (*sub rosa*) to the families of the attainted. Thus Fingask was leased to Drummond of Megginch, Lindsay of Evelick, Ogilvie of Inchmartin, etc., for behoof of Lady Threipland (Sir David’s wife) and her children. When Government (1730-31) *sold* the forfeited properties to the ‘York Building Company for raising the Thames water into London,’ this company homologated those leases, but this company failing, the estates which they had purchased were brought to the hammer by their creditors in 1782. It was then that Sir Stuart bought back the paternal estate of Fingask.

“The estates of those who were concerned in the insurrection of 1745-6 Government retained for a time, but eventually, after some years, when matters softened down, the estates were restored, but not the *titles* of the delinquents.

“The estates of the forfeited in 1716 had passed into other hands, and it was found impossible to extend the *Act of Grace*, as it was called, so far.”

II.

THE following reminiscences of Mr. George Bell have been kindly communicated by my friend Mr. James Craig, F.R.C.S.E., formerly of Ratho, whose opportunities of knowing him were unusually great. He became his pupil in 1816, and until June 1825—with the exception of a period of study in London—was daily with him, and present at every operation which he performed in Edinburgh. In 1820 he was chosen by Mr. Bell to be his house-pupil; his duties being to superintend the general arrangements of the surgery, to examine and prescribe for the numerous poor patients who came in the morning for advice, Mr. Bell's aid being always available when necessary, and to act with and assist the senior pupils in visiting patients at their own houses. He had also to make every arrangement for cases of operation, which in those days was a somewhat more formidable matter than it is now, and to take charge of the after-treatment. These various duties of his position constantly brought Mr. Craig into direct communication with his master, and enable him to write his impressions *now*, from ample opportunities not enjoyed by the ordinary pupils.

“Mr. Bell had a most extensive practice, both as a general practitioner and as an operating surgeon. He was *decidedly* the first operator in *his time*. From the facility, I may even say rapidity, with which he formed a *diagnosis*, I satisfied myself that he must have been a very diligent student, and also possessed a peculiar perceptive power, quickly deciding what should be done in

any case, and prompt in doing what was required. I have often been surprised at the tact and celerity he displayed in detecting impostures.

“He was an excellent anatomist, and used to visit the anatomical rooms occasionally, to refresh his memory, in anticipation of any operation in which important organs were concerned, and I know of one occasion, when the late Dr. Knox, the eminent teacher of anatomy, expressed his surprise at Mr. Bell’s accurate acquaintance, considering his time of life, with a minute point in regional anatomy.

“I never saw Mr. Bell commit a single mistake in operating, during the whole period of my connection with him.

“As an operator he was not rapid, I should say rather slow. He used to say, ‘that it was easier to operate quickly than slowly;’ but *safety* was the object he held to be paramount. He was always steady, precise, deliberate, calm, collected, firm, very cautious, and extremely successful. No unexpected emergency put him out. Naturally of a feeling heart, I have seen him in important cases, apparently very anxious prior to the performance of the operation; but the moment that the knife was in his hand, he was as firm as possible.

“His operations on the eye were beautifully performed and particularly successful. He was most careful in the selection of his knife, and before every operation, had it sharpened by an old cutler, Mr. Boog, whose shop was in the ‘Nether Bow.’ I have known Mr. Bell detect at once if the knife had been sharpened by anyone else.

“He intended at one time to publish a volume on

diseases of the eye, and employed the eminent artist, Mr. P. Sim, to delineate from nature in water-colours numerous diseased eyes, in illustration of the text. These paintings, between fifty and sixty in number, are now before me, and are very truthfully executed. Circumstances led him to delay his intention for a time, and he was afterwards so completely occupied, that he never had leisure to carry it out. Early in the century he published a small volume on the cowpock, addressed to the clergy of Scotland, many of whom were induced by it to become vaccinators in their several parishes.

“As a lithotomist he was extremely successful. That particular operation was the *first* he performed in the Royal Infirmary in 1799 or 1800; the *second* was tying the femoral artery in a case of popliteal aneurism, being the first occasion, I believe, in which that vessel had been tied in Scotland for this disease. This laid the foundation of his fame as an operator. The late Dr. Barclay managed to obtain possession of the limb upon the patient's death, some years afterwards. He injected the vessels, and the preparation is still in the museum of the Royal College of Surgeons.

“In performing the lateral operation for stone, he used a short strong scalpel for the external incisions, which were invariably free, and thus facilitated the extraction of the stone. He divided the prostate with what was then called Blizard's knife, and used the blunt gorget both for dilatation and as a guide to the forceps. He had no partiality for the gorget, but used it because he sometimes experienced difficulty in reaching the

bladder with his finger. He operated, I believe, 180 times, with a mortality considerably below the average. Lithotomy was the last operation he ever performed, in the autumn of 1829.

“Patients came to him from all distances and from all quarters, including the metropolis ; and his reputation as an operator was widely extended and well founded. In the northern counties of England, especially Cumberland, he was looked up to with something akin to veneration. Numerous cases for operation came from those parts, and he used to make an annual professional tour to England every autumn. His visits to distant parts were generally accomplished during the night, after finishing his day’s work in town ; and at that time the journey was usually performed by posting.”

III.

A BRIEF REVIEW AND ESTIMATE OF THE PROFESSIONAL WRITINGS OF BENJAMIN BELL, F.R.C.S.E., F.R.S.E., Author of *A System of Surgery*, and other Works. By BENJAMIN BELL, F.R.C.S.E., Surgeon to the Eye Infirmary, and Non-professorial Examiner in the University of Edinburgh.

[Reprinted from the *Edinburgh Medical Journal*, Nov. 1868.]

I HAVE been induced to attempt this review and estimate of my grandfather's surgical works by a passage in the recently published autobiography of Sir B. C. Brodie, in which that esteemed authority, unlike his wont, speaks of Mr. Bell's *System of Surgery* in a manner that savours more of arrogance than of discretion. After a careful reperusal of both of these writers, it appears to me quite evident that the earlier of the two, by many long years, must inevitably have lodged many seeds in the mind of his successor, of which he, when he wrote his own history, may have forgotten the original source. The *System of Surgery*, which he calls "an unreadable production," had already passed through seven editions—in spite of its seven volumes—and had been read by hundreds who looked to it as their standard authority, in the almost entire absence of those courses of systematic lectures in surgery which are now so universal.

Mr. Bell's earliest publication, as far as we can

discover, was "A Case of Obstinate Epilepsy considerably relieved by the use of the Flowers of Zinc." It appeared in the first volume of the *Medical Commentaries*, edited by Dr. Andrew Duncan, senior, in 1773. His next was in the third volume of the same work (1775)—"The History of a Case in which some of the Vertebrae were found Dissolved."

Two years later (1777), he published a work of greater pretensions, an octavo volume of upwards of 400 pages. It is entitled *A Treatise on the Theory and Management of Ulcers, with a Dissertation on White Swellings of the Joints*; to which is prefixed an "Essay on the Chirurgical Treatment of Inflammation and its Consequences." A second edition was called for in 1779.

It is dedicated to Percival Pott, surgeon to St. Bartholomew's Hospital, in grateful sense of the advantages which the author had enjoyed, when he had the opportunity, not only of observing ~~his~~ practice in surgery, but of becoming acquainted with the principles and opinions by which it was directed.

He informs us in the preface that the "Treatise on Inflammation and its Consequences" was originally read before the College of Surgeons several years previously—perhaps as a probationary essay, and being approved of by several of his friends, was now published with additions and alterations. It is a very creditable performance for the period at which it was written, and may be read with advantage even in the present day. A few points are deserving of special notice.

He dwells particularly on the danger which results from the admission of air, in the opening

of large abscesses and other collections of matter. Without condescending upon any theory, he adduces strong reasons for believing that the cause of disturbance really depends upon the entrance of atmospheric air, and recommends that such collections should be gradually opened by the introduction of a seton or cord. He states that since the practice was adopted in the Royal Infirmary, chiefly through the recommendation of Mr. James Rae, F.R.C.S. (1747), few or no disagreeable circumstances had occurred, and with this additional advantage, that a cure had commonly been obtained in little more than half the time usually found necessary after a large incision had been employed.

In describing the healing process in ulcers, he is anxious to make it quite clear that the cavity is diminished or annihilated by the *subsiding or wasting away of the parts that surround it*, more than by the growth of new parts. He takes a comprehensive view of the subject, and shows that he had studied it very carefully, both by observation and by the dissection of stumps after amputation. Founding upon this view, as well as practical experience, he urges the importance of pressure in the treatment of ulcers, in the legs and elsewhere, by means of a spiral bandage. We are so familiar with this principle of treatment now, that we are apt to overlook the merit of clearly expounding it ninety years ago.

His views in regard to the local and constitutional treatment of sores are very judicious. He rejects all complicated appliances, condemns too frequent dressings, and asserts that the *admission of air at each time of changing always tends to retard*

the cure, not only by acting as a powerful irritating cause, but as tending constantly to vitiate the nature of the discharge. This ought to be received with favour in these days, when the "germ theory" predominates.

His remarks on the process of cicatrisation and the dietetic treatment of the patient deserve attention.

In treating of vitiated ulcers connected with a low reduced habit of body, he makes an important remark regarding the efficacy of Peruvian bark—viz. that when given in large doses frequently repeated, it does more good than in small doses over a prolonged course. When cicatrisation is effected with difficulty and is not permanent, he attaches great importance to the use of an artificial issue, *believing from ample experience* that it will often do more towards the accomplishment of a cure than all the applications which are used in such cases. Are we not too neglectful, perhaps, of this procedure in the present day, not in old ulcers merely, but in other diseases?

His treatment of the *callous* ulcer consisted in rubbing gently the hardened and thickened edges once in two or three days with the lunar caustic; while the means recommended for a simple ulcer—mild local applications, and a spiral roller—are to be simultaneously employed.

The same principle may be seen here as in the modern practice of blistering the indurated boundaries of the sores, followed by water-dressing and a bandage.

He considers any special treatment for the varicose veins which usually attend such ulcers to be unnecessary.

Under the title of cancerous ulcer, he discusses the general subject of cancerous disease.

He explains the very discouraging view which Dr. Monro *primus* had taken (*Edin. Med. Essays*, vol. v.) as to the result of operations for cancer, by the circumstance that his eminence as a consulting surgeon made him cognisant of all the bad and old cases of the disease, whereas patients in the country apply at an early period to their own surgeon and have the tumour removed in time. He contrasts with Dr. Monro's experience the great success of his old master, the *late* Mr. Hill of Dumfries; mentions that he had been present at a considerable number of his operations, and knew that no fallacy or mistake could occur in the relation, Mr. Hill having been so exact as to keep a register of every case of any consequence that came under his management.

He strongly recommends an early removal of all suspicious tumours, upon the principle that at first they are virtually local affections. He insists on the propriety of removing in all cases the entire mamma, but condemns the unnecessary removal of skin as tending to prolonged irritation, an extensive cicatrix, and a more probable return of the disease.

He applies these principles in a special manner to the treatment of cancer of the lip, recommending strongly the v-incision now so generally preferred, and the bringing of the edges of the wound together, as in the cure of hare-lip. To this practice he has no hesitation in attributing the much greater success experienced for some years in the Edinburgh Royal Infirmary, than used to be the case when a considerable portion of the under lip was removed in the ordinary manner.

“*Observations on White Swellings of the Joints.*”
—These we consider very valuable, even in the present day, with all the additional light thrown upon the subject by a long succession of careful intelligent observers. His descriptions are good, and evidently drawn from the life ; while, at the same time, he displays a perfect familiarity with the morbid appearances discovered after death on the amputation of a limb. He had earnestly studied the whole subject, both as a surgeon and as a pathologist, and had arrived at the *important* conclusion that there are two distinct varieties of white swelling—one *inflammatory* or *rheumatic* in its nature, which commences in the membranes and ligaments of the joint, and proceeds inwards to the cartilages, and even bones ; the other, which is *scrofulous* in its nature, affects the cancellous texture of the bones, and proceeds outwards. In some cases of the former variety, early treatment by means of local depletion—he prefers cupping to leeches—and a succession of blisters, may arrest the disease ; but in many, the morbid processes advance without our being able to control them. In these instances he particularly notices the thickening of the ligaments, and an effusion into the surrounding textures of a thick glairy kind of matter, which appears to be the cause of that springy feeling peculiar to such swellings. He is evidently describing cases of gelatinous degeneration of the synovial membrane, without precisely defining the original seat of disease.

His description of the second variety is precise and accurate. The pain more acute and more limited to a particular spot ; the swelling inconsiderable at first ; but the least degree of motion

always productive of very great pain, so that the joint is kept by the sufferer in a bent position, even while it seems to differ very little in size from its fellow of the opposite side. By degrees the soft parts become swollen and elastic; partial suppurations form; these pass into sinuses, from which comes an ill-conditioned fetid discharge, manifestly connected with a carious state of the articular extremities.

The author attaches great importance to the diagnosis, because that form of the complaint which commences in the membranes admits of hopeful treatment; while for that form which begins with scrofulous degeneration of the osseous texture there is little to be done.

After the original inflammatory condition of the rheumatic form of white swelling has been arrested by means of cupping, leeches, and blisters, the joint, from having been long kept in one position, continues stiff and immovable. Mr. Bell insists very confidently, upon the ground both of practical experience and dissection, that this often depends not upon true ankylosis, as many imagine, but upon rigidity of the tendons and muscles. He therefore recommends the persevering use of gentle friction, not over the joint merely, but over the adjacent muscles. This should be applied thrice in the day, for an hour each time. He considers that the friction thus efficiently performed is more important than the embrocation employed; but he suggests, as convenient for the purpose, an ointment of quicksilver and hogs-lard, made with so small a proportion of the former as to admit of two drachms of the ointment being rubbed in on each occasion. He believes, however, that every

advantage may be obtained from the use of pure olive-oil, applied warm and rubbed in by means of an hour's gentle friction, performed regularly at least three times a-day. At the comparatively early date of his book (1779) he had seen several instances cured in this way, some of them having been thought to be of the worst species of ankylosis. May we not explain, on this principle, the remarkable benefit which sometimes attends the hopeful and persevering efforts of old women and others, not discouraged by pathological doubts?

We consider that in dividing the diseases previously comprehended under the appellation of *white swelling* into two well-defined forms, Mr. Bell made the first great step towards an improved pathology of the joints. In fact, his descriptions are so full and accurate, and his treatment so judicious, that a recent perusal of Sir B. C. Brodie's work upon the same subject creates surprise that no passing reference is made in it to a predecessor who had done so much, nearly half-a-century before.

Although Mr. Bell had published his *System of Surgery* five or six years previously, before referring to it I shall give some account, in the first place, of two other works on special departments—his *Treatise on Gonorrhœa Virulenta and Lues Venerea*, and his *Treatise on Hydrocele, Sarcocoele, and other Diseases of the Testicle*.

The former of these was published in 1793. It appears to me to be the ablest and most valuable of his writings, conveying the impression that his experience of the diseases treated of had been unusually ample; that he had investigated them with great pains; thought much and long upon the whole subject; and arrived at very decided opin-

ions, some of them original, some in direct opposition to writers of the highest authority. A careful perusal of the treatise, in the light of our present knowledge, has satisfied me that his views were very enlightened and in advance of the period when he wrote, so that a modern reader, if dispassionate, will find a great deal worthy of his attention, and very little at variance with the pathology and treatment of the present day.

The work was written subsequently to those of John Hunter ; and he states expressly in the preface, that the task was undertaken from the conviction that he and other authors had left much still to be elucidated. He commences by discussing very fully the much-debated question as to the identity or non-identity of the poison which causes *gonorrhœa* with that which causes *lues venerea*. He combats powerfully the well-known views of Mr. Hunter, and adduces many strong reasons for believing—what is now the accepted doctrine—that there are two poisons essentially distinct. Not to enter at large into these reasons, he shows conclusively, in my opinion, that if the diseases were identical, venereal sores on the *glans* and other surfaces ought to be much more common than gonorrhœal discharge from the urethra—whereas, even Mr. Hunter admitted that the opposite was the case, in the proportion of four or five to one.

Having established in a satisfactory manner that *gonorrhœa virulenta* and *lues venerea* are distinct diseases, he proceeds to describe the former, with its various consequences, and the treatment which these require.

The following is a succinct recapitulation of the whole subject :—

1. *Gonorrhœa* is a local disease, caused by a specific contagion.

2. The discharge of matter proceeds not from an ulcerated, but from an inflamed state of the urethra.

3. This inflammation, while confined to the neighbourhood of the orifice of the urethra, is never productive of alarming symptoms; a discharge of matter, ardor urinæ, and slight chordee being almost the only ones that take place.

4. The disease is always formidable in proportion to the depth of parts that are affected—Cowper's glands, the prostate, the bladder.

5. No advantage is derived from mercury, or any constitutional remedy. The disease is local, and requires local treatment.

6. When the urethra alone is affected, no remedy is so successful as an astringent injection.

7. The injection (sulph. zinci gr. i. ss., aquæ ʒi.), in order to be used with safety and advantage, must be thrown up with much caution, six or eight times a-day, at the commencement of the disease; seldomer as the discharge lessens; and then gradually laid aside.

8. Injections are never used but with much risk of doing harm, when the inflammation has reached to Cowper's glands, to the prostate, or the bladder.

9. The greatest attention is therefore required in distinguishing these stages of the disease, as a neglect of this has brought injections into unmerited discredit, when the fault did not lie in the remedy, but in the improper application of it.

10. In all states of the disease, when the inflammation has gone farther than the urethra, instead of wishing to check the discharge, we ought

rather to solicit a greater flow of it; while local depletion will be particularly useful on the approach of such symptoms as indicate inflammation of the mucous glands, of the urethra, of the prostate, or of the bladder.

11. When, in spite of depletion, low regimen, and other antiphlogistic means, tumours form in Cowper's glands or other parts contiguous to the urethra, and when suppuration is suspected, the matter should be immediately evacuated by an adequate incision.

12. Opium, especially in the form of injection, can alone be relied on for relieving pain and irritation in cases of inflamed prostate. The extract of hyoscyamus may *sometimes* be substituted for it with advantage.

13. These remedies are also useful in inflamed bladder; and the *uva ursi* is the most effectual remedy for obviating the discharge of thick viscid mucus, so commonly met with in these circumstances.

14. The general method of treatment of gonorrhœa is the same in women as in men; but in the former, injections may be used at all periods of the disease with more freedom, unless, indeed, the bladder be inflamed.

He next treats at large of the consequences of gonorrhœa; but I shall mention those views only which seem to be specially important.

Gleet is referred to various causes.

1. It depends, in some cases, upon relaxation or want of tone in the vessels of that portion of the urethra which had been inflamed, or, perhaps, of the excretory ducts of the smaller mucous glands of that passage. A relapse in such cases is not

contagious, unless from a new infection. The complaint, being local, requires local treatment. Astringent injections, or—if these had been previously used for the gonorrhœa—gentle stimulants, will be found advantageous. A solution of corrosive sublimate, one-eighth of a grain to the ounce of water, the passing of a bougie, the internal use of copaiba, Canada balsam, or turpentine, or tincture of cantharides—which act specially on the urinary passages—may be employed.

2. Gleet may proceed from *Cowper's glands*. The mode of diagnosis is well stated. Injections are not suitable. More benefit to be expected from the judicious use of a full-sized bougie, and from blistering of the perinæum. Such cases are apt to occur in scrofulous constitutions. "No remedy that has yet been employed in scrofula is in any degree equal to sea-bathing."

3. A very common cause of *gleet* is stricture in the urethra. For the removal of this, we must trust almost entirely to the use of bougies.

4. Swelling of the *prostate* is another cause of gleet. Opiate injections by the rectum are the chief remedy.

Speaking of gleet in women, he asserts that it sometimes depends on venereal sores within the vagina ; but remarks, at the same time, that there may be excoriations, as in men, from the acrimonious nature of the discharge ; and that, in these cases, the parts ought to be bathed with astringent injections, lime-water, or sugar of lead.

We direct special attention to chap. III. sect. iii., where several topics connected with the subjects already discussed are treated, upon the whole, in a judicious manner, calculated to guide and encourage

many young persons, who would otherwise run a great risk of falling an easy prey to ignorant or unprincipled quacks.

The topic of "Obstructions in the Urethra from Gonorrhœa Virulenta" is considered in a comprehensive way, and the entire section will repay perusal. We may particularise a few of the more important observations. The obstructions are arranged under four heads: 1. *Tumours* in the substance of the urethra and contiguous parts; 2. *Spasmodic affections* of the urethra; 3. *Caruncles*, or fleshy excrescences in the urethra; 4. *Strictures*, properly so called.

All these causes of obstruction are treated of very intelligently; the last is specially deserving of attention. When he entered the profession, strictures were generally believed to depend on venereal ulcers, and to need mercury as the principal part of their treatment. This erroneous view was doubtless closely connected with the notion, which Mr. B. Bell did so much to overthrow, that *gonorrhœa* and *lues venerea* have a common origin. He early abandoned the practice; but many years elapsed before the generality of surgeons were induced to confide in the use of bougies alone, without a simultaneous course of mercury.

His remarks on the use of bougies are quite up to the standard of the present day; and he enters into a very sensible discussion in regard to the use of caustic in the treatment of stricture, notwithstanding the then recent endeavours of Mr. John Hunter to re-introduce the practice by the invention of several ingenious instruments. He enters briefly upon the subject of perinæal fistula, and refers, for

a more ample consideration of that and cognate matters, to his *System of Surgery*.

Some important observations follow upon a class of cases which seem to have been more numerous in his day than at present. They are characterised by what may be called "*deranged sensation* in the bladder, urethra, and contiguous parts." Following *gonorrhœa*, it was not unnatural, at a time when the complaint and *lues venerea* were generally supposed to proceed from one poison, for the sufferers to be filled with anxiety, and to demand the administration of mercury as the most effectual remedy. Against this the author resolutely set his face. *Opium*, by the mouth, or still better by the rectum, was his favourite prescription. Some of the symptoms often yielded to a blister on the perinæum; and he had great confidence subsequently in *cinchona*, in sea-bathing when it could be obtained, and in the free local application of cold water.

There is a very good section upon swelled testicle as a consequence of inflammatory action in the urethra. He attaches great importance to early and active local depletion by leeches or punctures with a lancet. He believes that the inflammatory action is transmitted along the *vas deferens*, and appears first in the *epididymis*. If the latter continues hard eventually in both glands, impotence, or rather sterility, is the consequence.¹ Opium is very useful in the commencement of the affection, and ought to be employed unhesitatingly. A blister to the scrotum at a later period is often

¹ This is a very important remark, which Mr. Curling, in his excellent treatise on Diseases of the Testicle, inadvertently attributes to Gosselin, edit. iii. p. 440.

very efficacious. Cold-bathing of the part, and bathing in the sea, should not be neglected.

He gives a very clear and decided opinion, quite in accordance with our modern views, upon what is now called *gonorrhœa præputialis* or *balanitis*. Regarding it as entirely a local complaint, he treated it with mild astringent lotions, and condemned the too common practice of the time, which consisted in the administration of mercury. He makes an important observation, however, in connection with this subject, that when an excoriation of the glans or prepuce continues for any time *limited* and *circumscribed*, there is room to suspect a venereal origin, and the necessity for constitutional as well as local treatment.

He takes the same view of *warts*, which often follow gonorrhœa, and appear in either sex on the parts of generation. They require no mercury, and may be always cured by local treatment and great attention to cleanliness. We mention these things because, although recognised and acted upon as true in the present day, they were comparative novelties at the time when his treatise was published.

The second volume of the treatise is devoted to *Lues Venerea*, and is an able and masterly discussion of the subject, exhibiting great practical familiarity with it, and very decided opinions, evidently the result of careful observation and matured thought.

In giving some account of the volume, I shall confine myself, as hitherto, to those points in which the author seems to deserve most credit for independence of thought and soundness of view.

Chancres.—With regard to the phagedænic form

which primary sores sometimes assume, he is of opinion that it chiefly depends upon the nature of the matter producing them, because such sores seem to occur often at particular times, and may be traced to the same individual.

Buboes.—He has no hesitation in asserting that *lues venerea* may take place without any external mark being discoverable upon the part to which the matter of infection was applied. He possessed, when he wrote, twenty cases recorded of *bubo* taking place where not a vestige could be traced of previous *gonorrhœa*, *chancre*, or excoriation. It is important to advert to this view, as under such circumstances the *bubo* may be erroneously ascribed to a sprain, or to scrofula, the true cause being overlooked. But it is necessary to admit that the doctrine is not supported by the observations of M. Ricord, and other modern authorities. Another remark is, that although a *moderate* degree of inflammatory action in venereal sores, as a general rule, favours the production of a *bubo*, *violent action* prevents it, probably by interfering with the function of the absorbent vessels.

When, in consequence of a sore, the neighbouring glands become merely enlarged, we have few instances of the virus passing into the system, but if the glands suppurate and ulcerate, the disease generally breaks out soon in the throat and other parts of the body. This is another opinion which is not generally admitted, but our author lays it down as indisputable. When venereal buboes occur in a scrofulous constitution, they are more tedious and troublesome—a circumstance which both patient and practitioner should bear in mind. It was also his belief that the presence of *venereal*

poison in the system frequently leads to the development of a *scrofulous* taint which has previously remained concealed.

Under the head of venereal ulcers of the nose and mouth, he adverts to the great importance of distinguishing such affections from sores occasioned by mercury administered for the primary symptoms of the disease. He points out various diagnostic characters by which a practitioner of experience and ordinary attention may be guided ; and it was quite evident that he was in the habit of administering the supposed specific with more caution and discrimination than was usual eighty years ago.

There is a good section on secondary venereal ulcers proceeding from constitutional taint. He notices, in passing, that these are very seldom seen upon the genitals—the ordinary seat of primary sore. He combats strongly, as dangerous, Mr. Hunter's doctrine that no two diseases can exist in the constitution at the same time. He asserts that the combination of lues venerea with other diseases, particularly with *scrofula* and *scurvy*, is the most common obstacle which we meet with in the cure of almost every symptom of the first. The presence of *scrofula* has been already referred to ; that of *scurvy* was, in his days, often manifested during long sea-voyages, when a patient with lues was sure to have all the symptoms aggravated—the ulcers putting on a worse appearance, and the administration of mercury being necessarily abandoned.

The subject of nodes is treated with precision. He recognises two forms of the complaint ;—an enlargement of the osseous structure, and an in-

inflammatory affection of the periosteum with an effusion of fluid underneath. The former is very painful from tension of the periosteum; the pain ceases when the membrane is divided by the knife, or gives way in ulceration. A judicious course of mercury (he prefers inunction) will arrest the disease in its early stage, or heal the sores if it has gone that length; but neither mercury nor any other drug will remove the enlargement of the bone. The second form of node is more amenable to treatment. A blister, or a succession of them to the part, and a mercurial course will generally remove the swelling entirely. These affections of the bones and periosteum are in most cases met with at a late period after infection, but sometimes they occur much earlier, if the individual has been exposed very decidedly to cold and damp. He describes a more diffused swelling which affects the neighbourhood of those bones even which are well covered with muscles, and is not unfrequently mistaken for rheumatism from the nature of the pain, and from the circumstance that various parts of the body are simultaneously affected. He considers it as primarily seated in the periosteum, although implicating the neighbouring tissues, and as especially venereal in its origin. In his experience it never proceeds to the formation of matter, and yields to blisters applied along the whole course of the swelling, with an efficient use of mercury. *Iodide of potassium* was unknown in those days.

He considers *swelling of the testis* as an occasional result of constitutional infection. It may be distinguished from the various forms of sarcocele by the history of its growth, which is slow, compara-

tively painless, and commences with the body of the gland, not with the epididymis. The ascertained fact of *lues venerea* having been present, and still more *existing signs* of it, complete the diagnosis and suggest the administration of mercury, which will remove the swelling after all previous treatment has failed. In connection with this subject I may relate an anecdote or reminiscence which the late Dr. John Campbell gave me, when speaking of his old master's professional sagacity. He had accompanied him, along with some other assistants, to the house of a gentleman in Buccleuch Place, who was about to undergo the operation of excision of a testicle affected, as was believed, with malignant disease. All the preparations being made, Mr. Bell raised the patient's shirt before making the incision, when some blotches on the skin caught his eye. Without appearing surprised, he told the patient that he now believed that an operation would be unnecessary, and at all events ought to be delayed. The case was seen to be venereal, and doubtless yielded to a course of mercurial inunction.

The section "of the Venereal Virus" is an able and well-reasoned reply to the views promulgated by Mr. Hunter. That distinguished man, having adopted the theory that the venereal virus does not affect the fluids of the body, shut his eyes to many pathological facts which could not be explained according to that view, and went so far as to sanction practical proceedings of a very doubtful and dangerous nature. For example, he denied the possibility of a foetus being infected *in utero*, its mother labouring under constitutional *syphilis*; he denied that ulcers on the lips of an infant so

infected could convey the disease to the nipple of a nurse, and that she in her turn could infect other children.

That all these occurrences were possible and by no means uncommon, Mr. Bell asserts in the most decided manner; and that his opinion was borne out by undoubted facts will be admitted, I imagine, by every sound pathologist of the present day. He goes still farther, maintaining that a man who is affected with constitutional disease may communicate the same to his offspring, although he be entirely free from local disease at the time of cohabitation with the mother, the only conceivable medium of infection being the seminal fluid. Various instances of this had happened in his experience. Mr. Hunter, on the other hand, was so convinced that the venereal disease *can be propagated only by matter*, that he did not hesitate to sanction intercourse when such medium of infection was absent or scanty. It is curious to see how far wrong even a man of his genius and professional sagacity may be led by preconceived notions. He says:—"We may observe that even the blood of a pocky person has no power of contaminating, and is not capable of giving the disease to another even by inoculation; for if it were capable of irritating a sound sore to a venereal inflammation, no person that had this matter circulating, or had the *lues*, could escape having a venereal sore, whenever he is bled or receives a scratch with a pin, the part so wounded turning into a chancre." We shall quote our author's commentary on this statement:—"Mr. Hunter here assumes as matter of fact what is not the case; for although all wounds inflicted upon patients labouring under *lues venerea* do not

become venereal ulcers, yet frequently, and in almost every instance of the more advanced state of the disease, they do so. I have at this time a gentleman under my care whose case affords an instance of this, where the bites of leeches applied to the scrotum on account of the inflammation of one of the testes, the consequence of gonorrhœa, degenerated into venereal sores. This, I informed him, would not have happened from gonorrhœa alone. And, upon inquiry, he acknowledged that six months ago he laboured under chancres and bubo, for which he suspected that he had not used enough of mercury, and that for a week past he had felt uneasiness in his throat, where I found, on inspection, that an ulcer had already formed on one of the tonsils." Mr. Bell adds:—"I have met with a variety of similar cases, and every practitioner must have done so. It must be remarked, however, that we have seldom occasion to take blood, either with the lancet or leeches, in symptoms truly venereal. It is in *gonorrhœa* chiefly that this remedy becomes necessary; a circumstance, I may observe, that affords a *farther proof of the difference of the two diseases*; for while the symptoms in *gonorrhœa* are often so acute, and the inflammation so violent, as to render it necessary to discharge a good deal of blood, this almost never happens in *lues venerea*, a disease in which the parts affected become red and of a copper colour, accompanied with some degree of uneasiness, but in which that kind of inflammation requiring blood-letting scarcely ever takes place."

After enumerating the remedies used in *lues venerea*, and giving it as his opinion that mercury is the only one to be relied on, he enters briefly

into the various theories which had been proposed to explain its mode of action. He inclines to the opinion that it acts as an *antidote*, understanding by that a substance which, when it comes in contact with the poison for which it is appropriated, either renders it altogether inert, or so far changes its nature that no deleterious effects are produced by it. In support of this view various considerations are adduced. 1. We are more certain of curing this disease with mercury than of removing any other disease by any remedy whatever. 2. The beneficial effects produced upon local venereal symptoms, after mercury has entered the system, seem to indicate that the medicine comes into contact with the virus. It has been alleged that mercury cannot enter the circulation. Perhaps not in the metallic form; but that *essentially* it passes into the system is obvious, not merely from its influence in curing diseases, but from the taste it gives to the saliva, although it has been rubbed in at a distant part of the body; and from the well-known effect produced by the cutaneous exhalations of a person under mercury upon the gold and silver which he carries in his pocket. 3. It has been objected to the opinion that mercury acts as an antidote, that the quantity of the metal really employed is so small¹ that it is difficult to conceive how it can have any influence on the general mass of the blood, to which it must bear so small a proportion. We know that the disease

¹ Four grains of the mass of the *pilula hydrargyri* contain one grain of mercury. This quantity given three times a day, and continued for six weeks, would amount in all to little more than two drachms.

itself may be produced by a very small particle of poisonous matter. Surely it is as difficult to explain how the latter acts in assimilating quickly to its own nature such a large proportion of our fluids, as it is to explain the manner in which the mercury operates in curing the symptoms produced by it.

His remarks on "*the different methods of exhibiting mercury*" are valuable and consonant with the experience of subsequent writers. He considers the mode by fumigation as chiefly useful in cases where important parts are implicated, and where it is desirable to affect both the seat of local disease and the system with rapidity and promptness. Instead, however, of trying to complete the cure by means of fumigation, he would be content with averting *immediate* danger, and then proceed more leisurely with one of the other methods, which, although slower in their action, he believes to be more reliable in the end. These are the common blue-pill, and inunction with the mercurial ointment of one-half the ordinary strength. In most cases he gave the preference to inunction, being persuaded that all the objections that have been made to that method are trifling when compared with its advantages. When used for the removal of a local affection such as a bubo, it is desirable to make it pass, if possible, through the lymphatics of the part, and this determines the place to which the ointment should be applied; but if no such local symptom presents itself, it may be rubbed in over any part of the surface, the place of application being advantageously changed from day to day. A drachm and a half, or two drachms, should be used in a day at two different

times, with gentle friction for twenty minutes on each occasion, while the patient is exposed to the heat of a moderate fire.

The duration of a mercurial course, and the quantity of mercury to be exhibited, is duly considered. While condemning the violent treatment adopted by those who, believing that the morbid matter of *lues venerea* was carried off by salivation, saturated their patients with the medicine and often ruined their constitutions, he warns against the fashion then prevalent of administering what was called an alterative course, by which the gums were slightly touched, the patient being allowed to go abroad as usual. The result of all his experience was a full conviction that, to guard as much as possible against a return of the disease, a middle course must be observed between the severe salivation which our forefathers judged necessary and the opposite extreme into which the moderns have fallen. In the treatment of primary sores and buboes, he was in the habit of keeping up the mercurial action for a fortnight after the local symptoms had disappeared; but when the throat, skin, and bones were implicated, he always advised the course to be prolonged for a month after the cure was *apparently* completed. The alterative treatment appeared to be sometimes adequate to effect a cure, when commenced in good time; but secondary symptoms often followed, which refused to yield to such mild remedies. He mentions that when he wrote (1793), he possessed the history of more than fifty cases in which venereal sores, from resisting mercury under an alterative course, were judged to be incurable, but were afterwards completely cured by carrying the use

of mercury to a greater length than had previously been done.

We strongly suspect that the main improvement in the modern treatment of syphilis consists not so much in doing without mercury (for few, even the strongest opponents of that medicine, find this possible), as in promptly destroying the virus by judicious local treatment of the primary sore, and so preventing entirely the appearance of the secondary symptoms in the great majority of cases. But if the constitution has unfortunately become tainted by the virus—of which *iritis* and other forms of deep-seated ophthalmia are indications—there are few experienced surgeons in the present day, whatever their theoretical views may be, who hesitate to prescribe mercury as the most reliable means of cure. We also know that certain forms of secondary or tertiary syphilis are amenable to iodide of potassium—a remedy unknown in the days of Mr. B. Bell and his contemporaries.

There is an instructive section upon profuse salivation and some other effects of mercury. He regarded salivation as a common, but by no means a desirable or important, effect of its administration. As a general rule, undue action of the salivary glands of the skin or alimentary canal was an evidence of the mineral not gaining access to the system ; and therefore, while in favour of confining the patient to the house, he approved of large, well-ventilated apartments, sufficient but not excessive clothing, generous diet, but avoidance of whatever might irritate the stomach or bowels. He was of opinion that when salivation is easily excited, even under such favourable circumstances, the symptoms of syphilis generally yield to a small

quantity of mercury. But in order that the cure be permanent, the salivation must be kept up for some time by additional doses cautiously administered. He mentions an instructive case.—There were deep venereal ulcers on the shoulder and head, as well as a node upon one of the bones of the forearm. A violent salivation was excited by five mercurial pills, each of which contained a single grain of the mineral. This gave an entire check to the pain of the node and to the progress of the ulcers; and although only five additional pills were given, the salivation was kept up for eight weeks, when the sores healed, and the cure was complete, no venereal symptoms having reappeared after the lapse of several years.

The section on the *cure of chancres* will repay a careful perusal, containing, as it does, many details of treatment required by special circumstances. While recommending the free application of lunar caustic to the local disease, he always had recourse, at the same time, to constitutional treatment; indeed, experience led him to institute the latter for a week or ten days before employing the former. The reason for this was, that he found, by comparative and careful trials, that the local treatment, if not preceded by the constitutional, was followed by bubo in a large majority of cases. Of twenty-four patients treated with the immediate application of caustic, twenty had buboes; while only three buboes occurred in an equal number of patients to whom mercury had been previously administered. Mr. Bell attributes the different result to the local irritation from caustic causing more rapid absorption of the virus. This was probably a correct view; and the result

might have been different had he employed *nitric acid* or *caustic potash*, so as effectually to *destroy* the *chancre*.

The subject of *lues venerea in infants* is discussed with clearness and precision. He is at pains to disprove the doctrine laid down by Hunter, that, if new-born children are affected with the disease, they must have caught it during the process of delivery. This theory overlooks the fact that infants are often *born* with the disease, and even when no traces of it exist in the organs of the mother. Mr. Bell had met with cases which left no doubt in his mind as to the reality of such occurrences. One in particular he adduces.—An infant was born covered with a rash which had much the appearance of being venereal, and the only previous child of the family had been born with a similar rash, of which it died. The father, who had been married three years, informed Mr. Bell that he had been poxed about six months before his marriage, that his symptoms were *chancre* and a sore throat, but that, having passed through a mercurial course without any return of the symptoms ever since, he believed himself to be permanently cured. The father and child were treated by a full course of mercury; the child got well, and the succeeding children of the family exhibited no symptoms of the disease. Are we sure that the rash on the child was venereal? Yes; it infected two nurses who suckled it! The first became so much distressed with ulcers upon her nipples, and pain in one of her breasts, that she was obliged to leave the family. Although strictly warned of the nature of the case, and put under a course of mercury, she took home her own

child, previously given out to nurse, and suckled him. In two or three weeks he was poxed, and, in spite of every care, died. The second nurse also had ulceration of the nipples, followed by sore throat, and had to pass, before she was cured, through a mercurial course.

He dwells upon *constitutional syphilis* in the father as an undoubted and frequent cause of abortion. A well-directed course of mercury was, in his opinion, after extensive experience, an unfailing remedy in all such cases.

For obvious reasons, he maintains that, in every case, a syphilitic child ought to be nursed by its mother, or if that be impracticable, it may be fed by hand. Both mother and child require mercurial treatment; but we can seldom trust to the child being brought sufficiently under the influence of the remedy through the medium of its mother's milk, although this has sometimes succeeded. The fifth of a grain of calomel, or half-a-grain of gray powder, three times a-day, was found to answer the purpose of effecting a permanent cure, when continued about a month. If mercury is administered to a woman during pregnancy, with the view of obviating abortion, *inunction* is preferable to any other mode, as being less likely to act injuriously upon the stomach and bowels.

The concluding section of the book is very suggestive, and full of interest. It is entitled *Of Lues Venerea as inducing other diseases*. The author has no doubt as to the reality of such affections, and adduces some remarkable cases, in which symptoms of *phthisis*, *asthma*, *rheumatism*, *dropsy*, *headache*, *epilepsy*, and *mania* seemed to proceed from constitutional syphilis, and were cured completely by

the appropriate treatment with mercury, after all other remedies had failed.

A Treatise on the Hydrocele, on Sarcocoele, on Cancer, and other diseases of the Testis. 1794.

The author, after extensive experience in the treatment of hydrocele, was very decidedly in favour of the method of cure by *incision* of the tunica vaginalis. And certainly, if success is to be taken as a criterion in determining the advantages of an operation, we must admit that he had reason on his side ; for although he had then performed the operation in 165 cases, at all ages, from the third to the seventy-fifth year, not one had either died or been in danger, and in no case had the disease returned. He mentions that he was a student in London at the time when the mode by *seton*, advocated by Mr. Pott, and Mr. Else's mode by *caustic*, were the subjects of warm discussion. From what he saw there, he was led to prefer the *caustic* to the *seton* ; but the method by *incision* to either of the other two. He refers to the late Mr. James Rae of this place as an advocate of the treatment by *seton*, from having experienced some unfortunate results in that by *incision*. These were owing, Mr. Bell avers, to neglect of certain precautions in the mode of dressing the wound, and not to the operation itself. However that may have been, he speaks of Mr. Rae as, in his opinion, one of the best-informed practitioners and operators of the age. I find that he became a Fellow of the Edinburgh College of Surgeons in August 1747, and was president in 1764-65. This gentleman, with several others of his contemporaries, including Dr. Monro *primus*, gave an extensive trial to the mode

by *injection*, but finally abandoned it as not to be relied on. The same history attended it in London, the practice being altogether laid aside, until revived, towards the close of the century, by Mr. James Earle. Mr. Bell, considering the remarkable results which he had obtained from the operation by *incision*, looked upon the new method with natural disfavour; and although no surgeon of the present day would agree with him, we cannot wonder at the conclusion to which he came. For it must be remembered that, for many years after his day, the mode by *injection*, now so simple and certain, was often complicated in its performance and unsatisfactory in its results.

The remainder of the volume contains a sensible view of the other diseases enumerated in the title; and the operation of castration is well described.

The *System of Surgery*, which ultimately consisted of seven volumes octavo, and passed through seven editions, began to appear in 1783, and was completed in 1788. The volume on ulcers, white swellings, and the chirurgical treatment of inflammation and its consequences, of which I have already given some account, was incorporated in the larger work; and the substance of the two other books—the treatises on hydrocele and lues venerea—was also comprehended in the *System*, although, of course, many of the details and reasonings were greatly condensed. This being the case, it would be quite superfluous were I to give an account of the *System* at any length. The nature of the work, as intended for readers previously ignorant of the subject, and a substitute for oral instruction, which, in the Edinburgh school, at least in those days, was very limited,

makes it no easy matter to review or criticise it fairly in the present day. I am convinced, however, that it was a valuable guide to practice during the author's own generation; that it supplied a "felt want," to use a modern phrase, otherwise a book so bulky would never have passed through so many editions in a period so short; and, finally, that it contained many important views and practical suggestions, which not only redound to the author's credit, but even yet stand the test of subsequent experience and discoveries.

In confirmation, then, of these statements, I shall content myself at present by directing attention to some of those points in regard to which the author appears to be worthy of commendation.

He attaches great value to the use of solutions of acetate of lead, or Goulard's extract, when we attempt to procure the resolution of inflammatory swellings.

He was strongly opposed to the common practice in those days of making scarifications through the mortified parts down to the sound in cases of gangrene. In his opinion, he took precedence of his teacher, Mr. Percival Pott; for so early as 1779, in his essay on inflammation, he writes: "Although I am convinced from experience of what is here advanced against the use of scarifications, as well as of the impropriety and inefficacy of very warm stimulating applications in cases of mortification, it was not without diffidence that I first ventured to assert it. I am now happy to find, however, in a late publication, the *same practice recommended from the best authority*. In the same publication is given a particular description

of a species of mortification incident to the toes and feet, in which Peruvian bark has little or no influence, and in which opium given in large doses, frequently repeated, proves a very effectual remedy."

The following remarks at the close of a section upon "wounds in general" are worthy of quotation:—"It thus appears that a variety of circumstances fall to be considered, to enable us to judge of the probable termination of wounds. In doing this with accuracy, practitioners of experience have frequent opportunities of showing their superiority. This subject ought therefore to be considered as highly important by all who wish to distinguish themselves. A minute knowledge of anatomy, a cool temper, and a steady hand, will enable any practitioner, even with no great experience, to perform many of our most important operations sufficiently well: and, accordingly, in different hospitals, we daily meet with good operators; but we do not often find surgeons possessed of that knowledge in the prognosis of surgical diseases which might be expected, that attention being seldom bestowed which is necessary to attain it."

In the dressing of healing wounds, he takes *for granted* the importance of exposing them as little as possible to the air; he thinks that mild unguents are, in this view, preferable to dry lint, which was, before his day, the ordinary application, and that too frequent dressing of the wounds should be avoided, once in the day being generally sufficient.

His remarks upon the ligature of arteries, and other means employed by art for the suppression of hæmorrhage, are very creditable to his know-

ledge and skill as a surgeon. He tells us that the practice in common use, when he wrote, was, by means of a curved needle, to pass a ligature of sufficient strength round the mouth of the bleeding vessel, including a quarter of an inch all round of the contiguous parts, and then to form a knot of a proper tightness upon the vessel and other parts comprehended in the noose. This was the advice even of Samuel Sharp. But our author states all the objections to that practice which would occur to us in the present day, and recommends every bleeding vessel to be *isolated* by means of the tenaculum, and tied without any other texture being included in the ligature.

His account of aneurism is very good, and also his description of the old operation for that disease, by tying the affected artery above and below the tumour; but the new operation proposed and executed by Mr. Hunter, although commended as very ingenious and correctly described, is spoken of as "one the merits of which time and further experience must determine."

The chapter on injuries of the brain from external violence contains much important and valuable matter.

His views with regard to *concussion* and its treatment were evidently original at the time, and influence our practice down to the present day. A few sentences will be read with interest. Speaking of those who die from what is called *concussion* or *commotion* of the brain, he says: "In such instances, the brain we suppose to be somehow or other deranged; but it most frequently happens that the most accurate dissection cannot discover the nature of this derangement. From

this it is obvious that the effect of concussion of the brain is not an excitement of inflammation; for every stage of inflammation becomes obvious to dissection, and can scarcely indeed escape notice. Now, as it often happens in those whom we supposed to have died from concussion, that no appearance of inflammation in any part of the brain is discovered, it is not unfair to conclude that the effects of these two causes, inflammation and concussion, are distinct and perhaps very opposite in their nature and effects. But it is not upon speculation alone that I wish to rest either this or any other opinion of practical importance. The idea was first suggested by the different effects which I had observed to proceed from *bloodletting* in affections of the brain from external injuries. In many, great and evident advantages ensued from it, while no benefit was procured from any other remedy; but in others, instead of advantage being derived from it, the patients became obviously worse after every repetition of the operation. The pulse, from being full, gradually became weaker; and the strength of the patient commonly sinking in the same proportion, he seldom recovered from the effects of bloodletting, when practised to any considerable extent. From these circumstances, I have been led to think *that concussion of the brain operates upon the general system in nearly the same manner as syncope induced by fear, inanition, or any similar cause, in the treatment of which bloodletting is known to prove hurtful.*"

In cases of *compression*, where no outward signs of any kind indicate the precise seat or cause, he is probably too favourable to operative interference, although he gives plausible reasons for what he

recommends ; but still, instead of advising an indiscriminate application of the trepan in contusions of the scalp, or in fissures of the cranium, followed by symptoms of intracranial effusion or inflammation (as might be supposed from the reckless and dishonest statements of hostile critics), he contends, *in opposition to most of his contemporaries*, for the practice being restricted to a small number of exceptional cases. In truth, far from approving of the frequent use of the trepan, as if it were a light matter to expose the membranes of the brain, he evidently feels it necessary to apologise for proposing modes of practice at variance with long-established custom—"never having been conscious of being actuated by a spirit of innovation, or a desire of appearing singular." In all his operations upon the cranium, he urges the importance of saving the scalp and pericranium ; being in this advice decidedly in advance of his great preceptor, Percival Pott. Mr. Hey of Leeds also had the merit of suggesting this manifest improvement ; but the *first* edition of his book did not appear till after the *seventh* edition of the *System of Surgery*.

His account of diseases and injuries of the Eye is discriminating and judicious, and shows clearly that he had very considerable experience in that department of surgery. Let us remember that he wrote many years before those authors who, devoting special attention to the subject, have done so much for ophthalmology since the beginning of this century.

He treats the subject of *protrusions of the globe of the eye* in a very intelligent manner. An interesting case is narrated, in which the eye was

almost entirely turned out of the socket by a sharp-pointed piece of iron pushed in beneath it. The foreign body passed the wall of the orbit, and remained very firmly fixed for the space of a quarter of an hour, during which time the patient suffered exquisite pain. He was quite blind in the affected eye, so that there was reason to fear that the optic nerve had been torn across or permanently damaged. However, on removing the wedge of iron, which, as it had been driven to the head, was done with difficulty, the power of vision instantly returned, even before the eye was replaced. Everything did well, and the patient enjoyed very perfect vision.

In cases of tumours in the orbit beneath or behind the globe, he recommends them to be dissected out; if of firmer texture, or if containing fluid, to be laid freely open. He says: "It is necessary to remark that practitioners are in general too timid in operating upon tumours of this kind, owing to their near contiguity to the eye; but when they are evidently growing, impeding the motions of the globe, and likely to push it out of the socket, an immediate removal ought to be attempted. Even where these tumours have acquired a considerable bulk, they are more easily removed than is commonly imagined. By a cautious dissection, they may often be taken out, even where they pass deep into the socket, without hurting the eye."

A good account is given of cancer of the globe, and the operation of extirpation is well described. He urges the importance of an early operation, and shows that a groundless fear of hæmorrhage has too often deterred surgeons from performing it.

The operations of *extraction* and *depression* of the cataract are accurately described, and their respective merits compared. On the whole he prefers depression, founding his objection to extraction mainly on the injury apt to be inflicted on the iris, and the subsequent inflammation. He suggested as an improvement, that the section of the cornea might be made *above* instead of *below*. This has been very generally adopted. He also suggested extraction of the lens through the *sclerotica* and behind the *iris*—having performed it successfully upon rabbits. Several men of eminence have followed his suggestion with encouraging results, but the operation has never been widely adopted.

He gives a lucid view of the circumstances in which *bronchotomy*, or *tracheotomy* (as he thinks it should be called), becomes necessary. He argues in favour of its more frequent performance, and describes the operation with clearness and precision. He recommends a straight *double canula* to be employed, and gives a delineation of an instrument which he had invented, with a cutting-blade adapted to the double canula; the former being withdrawn as soon as the latter had fully entered the trachea.

The occasions for requiring *oesophagotomy*, and the mode of performing it, are discussed with much anatomical accuracy and precision. He shows that the hazard attending the operation is not so great as is commonly imagined.

After discussing the subject of *paracentesis of the abdomen*, he makes a suggestion, which has not received perhaps the attention which it deserves. He would puncture the abdomen in certain cases

where the intestines are enormously distended with air or gas, rather than allow the patient to die miserably, after the remedies prescribed by his physician have failed. The *trocar* should be of the smallest size, and uniform pressure ought to be employed in the same guarded manner as when the swelling is caused by fluid. He adverts to the benefit often derived from this operation in the lower animals.

He introduces the subject of *hernia* by a good anatomical account of the descent of the testicle, and the circumstances leading to the formation of *hernia congenita*. His observations on the general treatment of *herniæ* are very sensible. He is very decided as to the desirableness of operating as early as possible—not more than two or three hours being occupied in preliminary attempts at reduction. The operation for *bubonocèle* is remarkably well described. The question as to retaining the protruded parts without opening the sac, the management of gangrenous portions of gut, and of indurated and adherent omentum, are handled in a manner quite abreast of the present day. A case which occurred to himself is mentioned as then living and well, and voiding his *fæces* by the anus, in whom a foot in length of the intestinal canal had been lost by mortification in crural *hernia*. In the operation for crural *hernia*, instead of cutting the edge of the ring upwards, by which blood-vessels are endangered, it occurred to him that another method might be followed with advantage ; and having practised it with success, he recommended it with some confidence. “Instead of dividing the ligament in the ordinary way, —from below upwards—I make a slight incision

into it, beginning above, and proceeding to the under edge of it. The first scratch with the scalpel should be slight, but, by repeated touches, it should be made to penetrate almost through the whole thickness of the ligament, till at last only a thin layer of it remains. In this situation the protruded parts may, for the most part, be returned with ease, as the ligament, where thus weakened by the incision, will yield gradually to the pressure applied for the reduction of the intestines. This pressure, if done in a gradual manner, can never injure the vessels beneath the membrane, as vessels of their size and strength easily admit of much more extension than can be here required."

The subject of *stone in the bladder* is treated in a very full and satisfactory manner, conveying irresistibly the impression that it was one which he had thoroughly studied, and was master of by extensive practical experience. The chemistry of calculous affections was comparatively in its infancy; but many of his remarks on the causes and growth of urinary concretions will repay perusal. He gives a good description of the operation of passing a sound and searching for the stone. Instruments of the proper curvature are delineated. They were taken exactly from the natural shape of the urethra, being adapted to that passage after the surrounding parts were dissected off. In describing the use of the sound, and the difficulties often experienced in detecting a stone, he anticipates, I think, all the practical remarks of subsequent authors—even of Sir B. C. Brodie, who, in his *Autobiography*, tells us that he "found the book a most unreadable production, and doubts if

it was ever read by any one." Although published at least forty-five years before his own Lectures, this portion of Mr. B. Bell's *System of Surgery* contains quite as much real information, with the advantage of being fresher and less verbose.

As preliminary to an account of the *lateral* operation, he describes the other methods by which stones have been removed from the bladder. That by the *lesser apparatus* is first disposed of: having once entertained a favourable opinion of it, he had taken the trouble of performing it frequently on the dead subject, and then carefully dissecting the parts, so as to ascertain the real amount of injury. Although in every case the operation was done with every possible attention, he found invariably that either the *vesiculæ seminales* were divided, or their excretory ducts cut across; while, in some instances, the *urethra* was laid open before the scalpel reached the bladder. He devised an improvement upon the operation: after laying the bladder bare, by a semicircular incision over the centre of the tumour caused by the projection of the stone, instead of continuing the same kind of incision with which the operation commenced, a *longitudinal* incision was made directly on the centre of the stone, in order to avoid, with as much certainty as possible, all those parts that should not be injured. The *urethra* was thus avoided: but the *vesiculæ seminales*, the *vasa deferentia*, or their *excretory ducts*, never escaped.

He gives an account of lithotomy by the *apparatus major*, and shows that, although liable to many objections, it possessed much merit, and only required to be improved in a few circum-

stances to become the real lateral operation of modern practitioners.

The objections to the *high* operation are well stated ; but he makes an exception in its favour in cases where the stone is ascertained to be very large, provided the bladder admits of being sufficiently distended, the constitution good, and the patient not far advanced in life.

His account of the *lateral* operation cannot be too much commended. It is evidently the result of thorough intelligence upon the subject, and great practical experience. His anatomical knowledge was very precise ; and all his directions as to the external incision, the opening of the *urethra* without wounding the *bulb*, the division of the *prostate*, the extraction of the stone, are in strict accordance with it. Although admitting that the division of the prostate may be done with ease and safety with the scalpel alone, by a good anatomist accustomed to operate, and whose hand is perfectly steady, he recommends, as safer for general use, a knife constructed in such a manner as to protect the rectum, at the same time that it properly divides the prostate. For these purposes he considered the cutting gorget of Hawkins as pretty well adapted, but preferred one devised by himself, which seemed to possess peculiar advantages. He attached great importance to a free external incision, one reason for which is, the facility afforded in securing any vessel of considerable size that may be bleeding. He mentions that, in different instances, he had passed a ligature upon an artery almost as deep as the prostate gland. The danger attending lithotomy he considered as corresponding to the size of the stone to be extracted, so that in

healthy subjects, when the stone is small and the operation properly performed, he maintained that scarcely one in twenty dies. This average is high, and seems to indicate that, with all our modern acquirements, success in the lateral operation has not increased. The whole section is deserving of careful study, as the *evident source* from which many subsequent authors have drawn their principal information.

The treatment of calculi impacted in the urethra is very judicious and precise. Before having recourse to an incision, he urges the necessity of trying to allay muscular spasm by means of opium and the warm bath.

The subject of *retention of urine* is discussed in a comprehensive manner. When puncturing the bladder is absolutely required, he gives the preference to the operation above the pubes.

There is a good account of obstructions in the urethra. He had made himself familiar with these in all their varieties, by frequent and careful dissection of the structures involved. At the time he wrote surgeons spoke much about caruncles or carnosities in the urethra as a frequent cause of obstruction ; but Mr. Bell, while admitting that, in cases of warty excrescences upon the glans and prepuce, similar growths are occasionally met with in the urethra *near the meatus*, denied entirely that they deserved the importance usually attached to them. He also controverted the common idea that bougies are useful in cases of obstruction, by inducing suppuration, or by an escharotic action, believing that they act mainly by mechanical pressure, inducing absorption.

That his doctrines in regard to the treatment

of strictures were very enlightened, appears still more clearly from an interesting series of letters which he elicited, in 1804, from some of the more eminent surgeons of the day, in corroboration of his own views, and in opposition to the hazardous treatment by caustic, at that time so popular in London. These letters were, many years ago, placed by me in the hands of Mr. Syme, who considered them so important, and so creditable to the writers, that he edited and published them in the *Edinburgh Journal of Medical Science* for 1850.

Fistula in perinceo is discussed in a satisfactory manner, with regard to its causes and treatment. He considers stricture to be the principal cause, and advises our chief attention to be directed to its removal. If the fistulous passages still remain, they must be divided freely in their whole extent. After this has been done, he considers the subsequent use of bougies or catheters to be both unnecessary and prejudicial. He is very emphatic on this point, as one of "much importance, and meriting all possible attention." "In real obstructions of the urethra, bougies, as I have said, are almost the only remedy to be trusted ; but they are of no farther use after these obstructions are destroyed. When, therefore, a fistulous opening remains after the obstructions are removed, the operation I have described ought alone to be depended on ; and in this part of the case bougies ought never to be employed."

Hemorrhoids are perfectly understood by our author, both as to their structure and origin. In treating the disease, he found great advantage from gall-ointment, and the internal use of copaivi night

and morning, in doses varying from fifty to eighty drops. When operative interference was required, he tied them with a double ligature, exactly as we do in the present day.

Imperforate Anus.—The varieties of this congenital deformity are clearly described, with the appropriate treatment. He had two successful cases in which the gut lay deep, and was reached by a cautious dissection. Great attention, for a period of eight or ten months, alone prevented subsequent contraction and obliteration of the opening. Dossils of soft lint moistened in oil, and rolls of bougie-plaster of a proper size, answered better than any other application; and several times during the cure he succeeded in dilating the passage by introducing into it a portion of sheep's gut, shut at one end, and forcing up water by the other.

Fistula in ano receives a full and very satisfactory consideration. The pathology of it is quite in accordance with modern opinions; and the treatment by simple incision and mild dressing afterwards is insisted upon, in opposition to the more severe methods often adopted even then, and particularly to that by ligature, so strongly advocated by his great contemporary Desault. He was of opinion that, although several sinuses may exist, there is seldom more than *one* opening into the gut, *which will be found within reach of the finger*, and that nothing more is needed than to divide the entire septum between the sinus and the gut, taking care that the aperture into the latter forms part of the incision.

There are some good general observations on the subject of *fracture*. He had met with various

instances of peculiar brittleness of the bones, depending on constitutional syphilis, in which the largest and hardest bones were broken solely by the ordinary action of the muscles of the limb. He attributes the chief credit to Mr. Pott for what he calls the present improved state of this important branch of surgical practice. But, curiously enough, he believes in *exuberancy of callus*, although admitting that the deformity may *sometimes* depend on the fractured bone not being properly replaced, or not retained with exactness afterwards.

Fractures of the neck, of the thigh-bone, and dislocations of the femur, are described with some confusion, and the diagnosis lacks precision; but we must remember that he wrote many years before Sir Astley Cooper and other more recent authorities had so thoroughly investigated the whole subject. He gives it as his opinion, that an effectual method of securing oblique fractures of the thigh-bone is one of the greatest desiderata in modern surgery.

The chapter on *compound fractures* deserves careful perusal. He discusses the question of amputation, and shows that our practice must be determined, not merely by the amount of injury, but by the surroundings of the patient.

The subject of *dislocations* in general is treated in a very sensible manner, evincing sound views as to the principles of treatment. Luxations of the humerus were evidently thoroughly understood; and he mentions that he often succeeded in reducing the bone after an interval of two, three, and even four months, although wisely cautioning the reader against persisting too long, under such circumstances, in the use of forcible extension.

Dislocations of the femur, as already hinted, are

described with less precision. He had met with only one form of the accident in his own practice, namely, that into the *obturator foramen*; and he describes very clearly the mode of reduction which he had successfully employed in such cases. It accords in all essential points with that recommended in the present day. He dissents emphatically from the opinion then prevalent—that *subluxation* of the femur is a possible thing. He admits that the head of the bone may, in a gradual manner, be pushed out of the *acetabulum* by a tumour at the bottom, but does not suppose that it can ever occur from external violence.

Necrosis is treated rather briefly, the reader being referred to a treatise on that subject by his friend Mr. Russell,¹ who was the first to give a systematic account of it, characterised by fulness, clearness, and perspicuity.

The subject of amputation is discussed very fully, and had obviously received much anxious consideration in all its aspects. The section devoted to the causes which may render the operation necessary is full of interest and instruction, bringing before us, as it does, many important doctrines in surgery viewed from the standpoint of an experienced practitioner of seventy or eighty years ago.

In his general remarks upon amputation, he dwells on the importance of saving skin so as to completely cover the stump, and refers, with justifiable complacency, to his own share in introducing an improved practice. He mentions that, while

¹ A Practical Essay on a certain Disease of the Bones, termed Necrosis, illustrated with six plates. By James Russell, F.R.S., Surgeon, Edinburgh.

attending the hospital here, as well as those of London and Paris, the inconveniences arising from the want of attention to the saving of skin in various surgical operations struck him forcibly, so that he resolved to embrace every opportunity, in his own future practice, of treating this point with particular attention. From the year 1772, he laid it down as a maxim not to be deviated from, to save as much skin and cellular substance in the removal of tumours, when the soundness of parts admitted of it, as would completely cover the wound, and to carry out the same principle in all amputations of the extremities. He performed amputation for the first time that year, and finding the improvement of saving skin to answer even beyond his expectation—for the cure of a large stump of the thigh was completed in three weeks—he never failed to put it in practice afterwards, both in public and private. Some deviations were occasionally introduced in the mode of doing it, with the view of rendering the operations more perfect. “In various cases, large stumps which, by the usual method, would have required several months, were cured in as many weeks. In a few, the parts united by the first intention; and in all, a plain uniform stump was produced.”

After he had practised his method for some years, Mr. Alanson of Liverpool published some “Observations on Amputation,” in which he recommended very warmly a method of amputating that admitted of stumps being, in a great measure, healed by the first intention. While acknowledging that Alanson’s method was deservedly regarded as superior to every other that preceded it, our author still continued to prefer and practise his

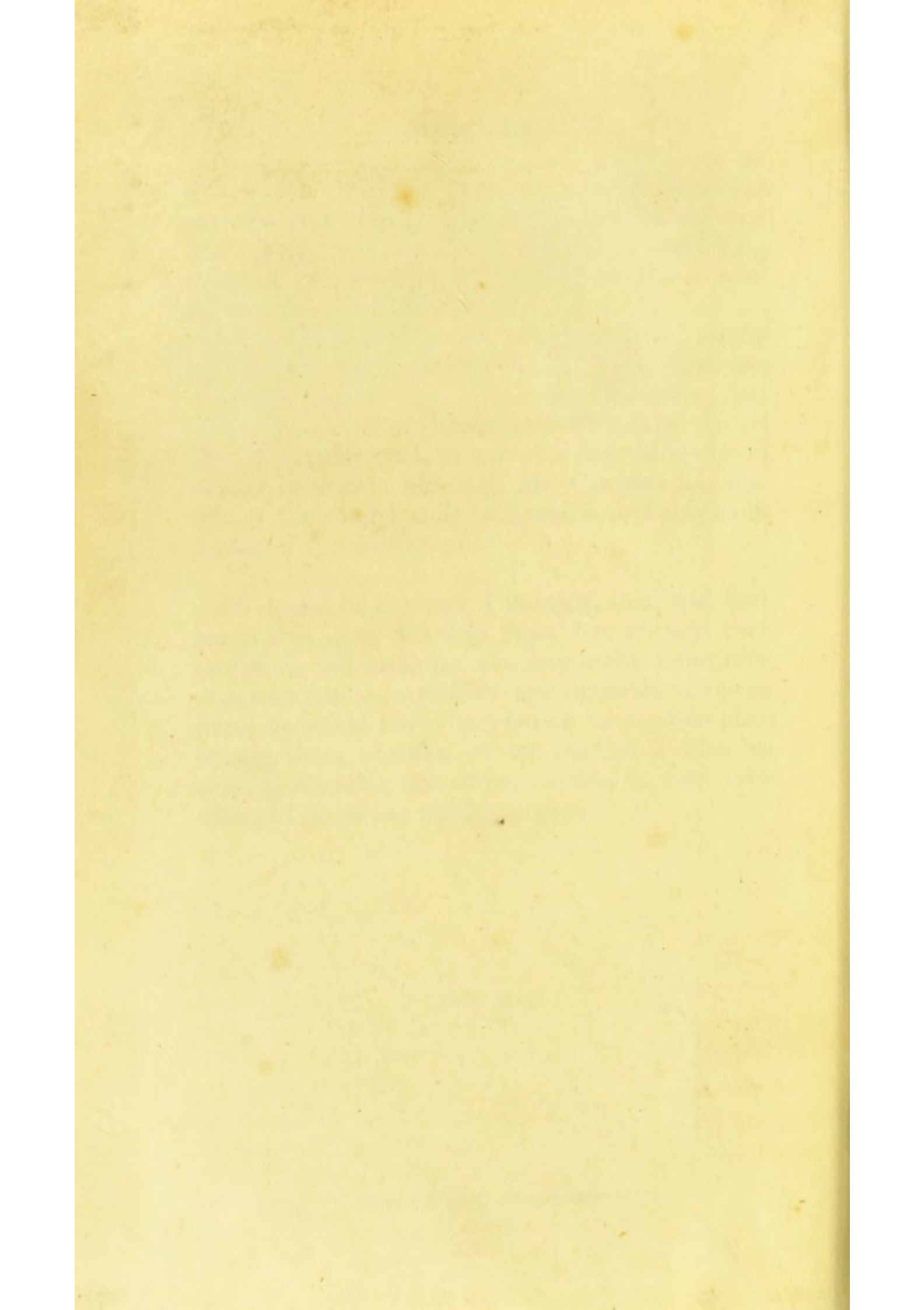
own. He describes both in a very particular manner, with great attention to details, showing how careful he was as a practitioner in employing every likely means for the attainment of a successful and satisfactory result.

He had another mode of amputating, chiefly applicable to the lower third of the thigh, by means of a long anterior flap. It is an interesting fact that Mr. Teale of Leeds and Professor Spence should have devised, in our own day, an operation almost identical; although Mr. Carden's amputation at the condyles of the femur is probably to be preferred to all of them.

It cannot be doubted, I imagine, that, had Benjamin Bell done nothing more for surgery than introduce and establish the important innovation of *saving skin*, as a rule, in the majority of operations, he would have deserved an honourable place among those worthies of our profession who, besides performing its duties creditably, have also enlarged its power for doing good.

THE END.





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