## APPENDIX TO ANNUAL REPORT.

## MEMOIRS.

FIELD-MARSHAL SIR JOHN FOX BURGOYNE, Bart., G.C.B., &c., &c., &c., was born in Queen Street, Soho, on the 24th of July. 1782. He was the son of the Right Honourable General Burgoyne, who commanded the expedition from Canada against the United States in 1777, and who, in consequence of the orders to Sir William Howe to co-operate with the movement having miscarried. was forced to surrender with his whole army, to the Americans. at Saratoga. Sir John's godfather was Charles James Fox. from whom he took his second name. Young Burgoyne was only ten years of age at the period of his father's death, and General Burgoyne having left debts which the proceeds of his estate barely sufficed to cover, his son was left without resources to make his way in the world. Lord Derby, the great grandfather of the present Earl, and the intimate friend of General Burgoyne, however, kindly undertook the care of the orphan boy, gave him a home, and supplied means for his education. He was for some time with a private tutor, the Rev. Mr. Maule, at Cambridge, from whence he went to Eton, where he was fag to the historian Hallam. In 1796, he entered the Royal Military Academy at Woolwich; and in 1798, at the early age of sixteen, obtained his first commission as lieutenant in the Royal Engineers.

From his first entrance into the army, John Burgoyne commenced a career of active and laborious service, which continued without intermission for the extraordinary period of seventy-one years. In 1800 he embarked in the expedition under Sir Ralph Abercrombie; but was detached at Minorca, to be employed in the blockade of Malta, and was present at the capture of Valetta. He joined the army in Sicily in 1806, accompanied the expedition to Egypt, as Commanding Engineer, and served at the assault of the lines of Alexandria, and the siege of Rosetta. Sir John Moore, who was much struck with the abilities of the young officer, now applied for his services, and in 1808 he accompanied the expedition to Sweden, and went afterwards to Portugal. He was

present during the retreat to Corunna, during which he blew up the bridge at Benevente, in presence of the advancing enemy, and thus checked the pursuit. In 1809, he joined the army in Portugal under the Duke of Wellington, then Sir Arthur Welleslev. and was engaged in all the great actions of the campaign, including the passage of the Douro, the affair of Salamonde, the retreat to the lines of Torres Vedras-where he blew up Fort Concepcion in the presence of the enemy, a successful operation requiring great judgment and coolness—the battle of Busaco, the first siege of Badajoz, the action of Elbodon, the action of Aldea de Ponte, the siege and capture of Ciudad Rodrigo, and the siege and capture of Badajoz. Both at Ciudad Rodrigo and at Badajoz, Burgoyne accompanied the 3rd Division in the assault, and obtained at each a step of Brevet rank. He served as Commanding Engineer at the siege and capture of the Forts of Salamanca and in the battle of Salamanca, at the capture of Madrid and the Retiro, where two thousand French troops surrendered, and at the siege of Burgos, where he was wounded. He was present during the advance in 1813, at the battle of Vittoria, where his horse was shot under him, and at the siege of San Sabastian, where he was severely wounded in the assault. He conducted the siege of the Castle of San Sebastian, as Commanding Engineer, his senior officer, Sir Richard Fletcher, having been killed in the assault upon the town; he was engaged in the action of the Bidassoa, the battles of the Nivelle and of Nive, the passage of the Adour, the blockade of Bayonne, and the repulse of the sortie. Burgoyne afterwards accompanied the expedition to New Orleans as Commanding Engineer, and served in the attack on the enemy's entrenched position, and at the capture of Fort Bowyer. On his return from New Orleans, he joined the army of occupation in Paris. At the close of the war in 1815, Lieut.-Colonel Burgoyne. then aged thirty-two, had been mentioned eight times in despatches. had received five gold medals, the cross of the Tower and Sword. and the decoration of the Bath.

During the campaign in the Peninsula, Burgoyne earned that high reputation for bravery, judgment, and unflinching adherence to duty which accompanied him throughout his long life. His coolness in danger was the admiration of all who served with him. Lieut.-Colonel Nevill, 63rd Regiment, in his relation of the siege of Burgos, says, "Colonel Burgoyne was the wonder of us all; he seemed to bear a charmed life, for he was almost ever in the trenches, mines, and lodgments;" and an anecdote is narrated of the Duke of Wellington at one of the sieges, exclaiming, "Here

comes that fellow Burgovne, bringing up all the fire after him, as usual!" Burgoyne having cut across parallels, zigzags, &c. to obey a summons of the Duke. In spite of the diffidence and retiring disposition which characterized him, Colonel Burgoyne early attracted the notice, and won the steady regard, of his commanding officers. Sir Thomas Picton, whose Division (commonly called the Fighting Division) he accompanied in most of the actions and sieges in which it took part, conceived a warm friendship for him, which was continued to the death of that distinguished officer. On finding that Burgoyne's application to accompany the army to Belgium was refused, on account of the wish of the Government of that day to give the command of the Engineers to another officer possessed of party interest, Sir Thomas earnestly applied to be allowed to take him as an aide-de-camp. This request. however, was rejected, and Burgoyne, to his great disappointment, lost the opportunity of bearing a part in the crowning fight of Waterloo.

Peace came at last, but brought no rest to the unflagging energy of Burgoyne. He then commenced a long period of Civil Service, as arduous if not as dangerous as his military campaigns. He was appointed Commanding Engineer at Chatham until 1827, when he was sent in the same capacity to Portugal with the army under Sir William Clinton. On his return, he occupied the post of Commanding Engineer at Portsmouth. In 1831, he was appointed chairman of the newly constituted Board of Public Works in Ireland, an office which he held for thirteen years. this time he was employed on many undertakings of great public utility. He acted as chairman of a commission for the improvement of the navigation of the Shannon, on which elaborate reports were made, and published among the Parliamentary Papers; and subsequently the proposed works of great extent were carried out by the same Commissioners. He was a member of the Commission appointed in 1836 "to consider and recommend a general system of Railways for Ireland," of which Mr. Thomas Drummond, then Under Secretary of State for Ireland, was President, and Mr. Peter Barlow, Hon. M. Inst. C.E. and Sir Richard Griffith, Bart., M. Inst. C.E. (then Mr. Griffith) were members, and the late General Sir Harry Jones, M. Inst. C.E., was the Secretary. The Commissioners entered into a number of investigations, and drew up a report 1 of much interest. A great portion of this report

<sup>&</sup>lt;sup>1</sup> Vide "Second Report of the Commissioners appointed to Consider and Recommend a General System of Railways for Ireland," Folio. Dublin, 1838.

was written by Colonel Burgovne, and it is now admitted that had the advice therein given been followed, the present embarrassments on the subject of Irish railways might in a great degree have been avoided. Both in framing this report, and in his subsequent endeavours to establish a system of State Railways for Ireland, Colonel Burgoyne derived material assistance from the labours of Mr. Charles Vignoles (late President Inst. C.E.). Colonel Burgoyne was also Chairman of Commissioners of Drainage, Member of the Board of the Wide Streets Commissioners for Dublin, and chief Commissioner of Kingstown and Dunmore While fulfilling these duties in Ireland, Colonel Burgoyne was requested by the Master-General of the Ordnance to report upon a matter which had been under discussion for some years, relative to giving up an old battery at Liverpool, which impeded the construction of new docks there. His report adjusted the dispute, and he submitted plans for a new battery, which was subsequently constructed. For this service he received a complimentary letter from the Master-General and Board of Ordnance.

Colonel Burgoyne was one of the founders and the first President of the Institution of Civil Engineers of Ireland, and delivered the inaugural address on the 6th August, 1835. In 1838, he was promoted to the rank of Major-General, and was made a Knight Commander of the Order of the Bath. On the 12th of February, 1839, Sir John Burgoyne was elected an Honorary Member of The Institution of Civil Engineers. The letter announcing his election states that "the Council and Institution felt such a tribute of respect to be most justly due to his eminent acquaintance with the public works of a sister country, and to the interest taken by him in the pursuits of the Civil Engineer."

Mr. Rowland Hill's project for a cheap postage was taken into consideration in 1838. Burgoyne took the deepest interest in the plan, and did all in his power to insure its success. The energy and perseverance with which he prosecuted inquiries into every subject which he believed might be conducive to the public benefit, were well exhibited in his exertions on this occasion. In a letter from Mr. George Moffatt, M.P., one of the warmest partisans of the scheme, that gentleman thanks him for a Paper, "the result of a series of elaborate calculations, and practical observations upon the change in the existing system of postage taxation," which Paper was transmitted to the Chancellor of the Exchequer. Burgoyne strongly advocated the immediate reduction of the charge upon letters to a penny, instead of the tentative measure of a twopenny postage which was at first proposed.

In 1845, Sir John Burgoyne received a letter from Sir George Murray, Master-General of the Ordnance, offering him the post of Inspector-General of Fortifications, and assuring him that his appointment to that office would be popular in the whole corps of Royal Engineers, at whose head he would thus be placed. He accordingly resigned his appointment at the Board of Works and left Ireland, followed by the regret of all who had been associated with him there, in either a public or a private capacity. An address from the Institution of Civil Engineers of Ireland was presented to him at the time of his departure, accompanied by the following letter:—

" SIR,

"I have the honour to inform you that at a recent meeting of the Institution, it was unanimously resolved, That an Address should be presented to you from the President and Members, expressive of their deep regret at your departure from this country, and your consequent resignation of the Presidentship of the Institution, and I now beg to forward to you this Address.

"I have also the honour to inform you that, by direction of the Council, you have been transferred from the class of Ordinary to that of Honorary Member of the Institution. I feel peculiar pleasure in being the means of conveying to you this Address, expressive of those feelings in which I am aware every Member of the profession unites, towards one who so jealously guarded its best interests in this country.

"I have the honour to be,

"Sir,

"Your most obedient Servant,

"T. Oldham,

"Secretary."

One of Sir John Burgoyne's first acts, on assuming the post of Inspector-General of Fortifications, was to draw up a letter to the Master-General of the Ordnance, containing an exhaustive statement of the deficient means of protecting the country against foreign invasion. This communication elicited from the Duke of Wellington his celebrated letter, the publication of which first awakened the country to a full sense of its defenceless state, and strengthened the Government in their measures to guard against the disasters which must have eventually ensued from such long continued neglect. Soon after Sir John Burgoyne's establishment in his new position, his services were called upon

for an undertaking most difficult and unprecedented, namely, that of organizing and directing the operations of a Relief Fund for the distress in Ireland, caused by the famine in 1847. In the Treasury letter relating to Sir John's appointment, it is stated that his "intimate knowledge of Ireland, and the confidence with which he is regarded in that country, have induced Her Majesty's Government to select him to be the head of a temporary Commission about to be appointed for the adoption of further measures for the relief of the distress arising from the scarcity." Mr. Labouchere, then Secretary for Ireland, said in a letter he addressed to Sir John at that time, "I am sure that your assistance to the Lord Lieutenant at this juncture will be productive of the best results, and your name will inspire more confidence and respect than that of any other man who could have been selected for the difficult task you have undertaken. I assure you that in common with every other member of the Government, I am fully sensible of the obligations which both the country and we are under to you for the sacrifice of personal comfort which you have made for the public good." It is unnecessary here to enter into any details of this gigantic undertaking. It was universally admitted to have been completely successful, and the Government openly acknowledged that for the main part of that success, they were indebted to the judgment and exertions of Sir John Burgovne.

On his return to England he was employed on many Commissions on various subjects connected with the public service. Thus, in 1848, he was appointed with Lord De Grey and Mr. Thomas Greene, M.P., Royal Commissioners, to superintend the completion of the new Palace of Westminster. In 1849, he was requested to proceed to Inverness, for the purpose of inquiring into the state of the Caledonian Canal, and into the causes of the inundations by which the town of Inverness had suffered considerable injury. Upon this subject he made a comprehensive report, which has been deservedly praised by many eminent Civil Engineers. The next subject of public interest on which he was engaged was old Westminster Bridge, on the state of which he made a report, at the desire of the Chancellor of the Exchequer, who was at the head of a Commission, consisting of no less than ninety-eight members, for the management of the affairs of the In this report, dated September 1849, Sir John gave a decided opinion that any attempt to prolong the period before an entire reconstruction would be hopeless without an utter waste of large sums of money; and he recommended that a temporary bridge should be at once constructed, the old structure be entirely

removed, and operations for a new bridge be proceeded with uninterruptedly. His conclusions were ultimately adopted by the Government, and the present structure was the result. The Royal Commission on the Transatlantic Packet Stations was constituted in 1850, and Sir John was appointed one of its members, the others being Earl Granville, the Hon. William Cowper, M.P., Admiral Sir James Gordon, and Captain Ellerby. He was also a member of the Commission on Army Promotion, and served on confidential Committees nominated to investigate and report upon Lord Dundonald's, Captain Warner's, and other inventions, supposed to be of importance to the military service. When the first Commission of Metropolitan Sewers was instituted, Sir John Burgovne was nominated one of the original members, and on its expiration in 1852, he was re-appointed to serve on the second Commission. the Great Exhibition of 1851, Sir John was Deputy Chairman of the Jury for Class VIII., of which Baron Dupin was Chairman. About this time he became associated with a Society to promote an object in which he always felt deep interest; that of obtaining a cheap and uniform system of International Postage. He was also employed on many secret Committees and Inquiries, on most of which he addressed reports to the Government, which produced more or less important results.

In 1854 the peace of Europe became endangered by the menacing attitude of Russia towards Turkey, and Sir John Burgovne was despatched to the East by the Government, to consider the best means for the defence of Constantinople and the Dardanelles, against an advance by the Russians. There was at that time no idea of sending out large forces from France and England, and Sir John's plans were consequently limited to the construction of defensive lines at the Dardanelles and the Bosphorus, which would enable the Turks, with the aid of an Allied Fleet, to protect themselves against an attack. The Governments of the Allied Powers, however, afterwards resolved upon bolder and more extensive measures, and it has always been understood that Sir John Burgoyne's representations to the Emperor Napoleon had much effect in determining him to send out large forces to the scene of action. When the expedition to the Crimea was decided upon, the Government wished to afford Lord Raglan the assistance of one whose military skill and experience was well known. The Duke of Newcastle sent for Sir John Burgoyne, and, after ascertaining that he was willing to undertake the duty assigned to him, inquired how soon he would be ready to set out? "In twenty-four hours," replied Sir John; and in that space of time he made all his

preparations, and left England for Turkey. For a man of seventytwo years of age, this must be regarded as an extraordinary act of vigour and energy; but Sir John's excellent constitution and equable temper had prevented the weight of years from pressing upon him. At the age of seventy, he was actually younger than many men of fifty. He was wont to observe that when at school his playmates used to call him old Burgoyne, while now that he was advanced in years he became generally known as young Burgoyne. The operations in the Crimea are of too recent date to require much repetition. It was to Sir John Burgoyne that many of the most important steps of the campaign were due. recommended the spot where the landing of the troops eventually took place; he originated the celebrated flank march; and he fixed upon the Malakoff as the key of the position, and strenuously urged that the attack should be directed upon that point. His iron frame appeared incapable of injury by hardship or fatigue. He rode by Lord Raglan's side through the battle of the Alma. accompanied him in the subsequent long march, and slept on the ground in the open air, like the youngest soldier of the army. When the disasters of the winter caused great public discontent in England, and the years of the commanding officers became numbered against them as so many crimes, the Government gave way to the popular clamour, and recalled Sir John Burgoyne. Sir John felt this deeply as a slur upon his military reputation, yet he never uttered a word of complaint; and when examined before the Sebastopol Committee, shortly after returning to England, he did not allow any sense of injustice to influence his evidence, or to draw from him any disclosures or opinions which might prove injurious to the Government which had sacrificed him. The fall of Sebastopol, in September 1855, by a successful attack on the Malakoff Tower, proved the wisdom of Sir John's counsels, and vindicated his military judgment. The Government created him a Baronet, the notification of the Queen's pleasure being conveyed to him in a very complimentary letter from Lord Panmure, Secretary of State for War, stating that the distinction was granted to him for his "long and faithful service to the Crown, which had lately been attended with such important results in the Crimea." He was now promoted to the rank of full General, the commission being antedated, so as to place him in his proper station above those officers who had passed over his head since his return from the seat of war. He also received the thanks of both Houses of Parliament.

Shortly afterwards Sir John was appointed a member of the

Defence Committee, on which he continued to serve until his death, and of the Commission for the distribution of the Patriotic Fund. He was likewise one of the Jurors of the Great International Exhibitions of 1855 and 1862. He took great interest in the formation and subsequent welfare of the "Engineer and Railway Volunteer Staff Corps," from which he anticipated important results in the organization of railways for the conveyance of troops, and he frequently, both in speaking and writing, expressed his appreciation of the merit and value of that corps of which he became an Honorary Member. In a letter to Lieut.-Colonel Manby, Acting Adjutant, Sir John says,—"It is a corps certainly calculated to render very eminent services, and I shall never cease to take a deep interest in it and its objects."

After the disastrous explosion of a store-magazine at Erith in 1864, a Committee was appointed to inquire into the state of the Military and War Department Magazines. Of this Sir John Burgoyne was President. The report, which was a very able document, was drawn up by him, and has become the text-book by which the storage of gunpowder is regulated in the public service, all the recommendations having been adopted by the Secretary of State for War. Sir John was afterwards employed as a member of a Committee on the Concentration of the Public Offices.

In 1865, the dignity was conferred upon him of Constable of the Tower of London and Lord Lieutenant of the Tower Hamlets. Sir John was the first Commoner who had held that office since the feudal era, and he greatly prized the appointment. The distinction, however, was purely honorary, the salary, originally £1000, being discontinued after the death of Lord Combernere. Sir John's immediate predecessor. In 1868, Sir John Burgoyne retired from the office of Inspector-General of Engineers. consideration of his long services, extending without intermission over a period of seventy-one years, he was allowed to retain the full salary of the office he last held, and he was promoted to the rank of Field-Marshal. But Sir John's labours did not cease on his retirement from office. He was still a member of various Committees and Commissions which he regularly attended. His advice was sought on several important military questions, and he wrote articles in newspapers and magazines on most of the military topics of the day. His interest on every point which affected the public good was as great as ever; his opinions and counsels appeared at last to be appreciated at their full worth. and there was every appearance of his passing many years peacefully with

"All that should accompany old age, As honour, love, obedience, troops of friends;"

when a heavy blow fell upon him which shattered even his iron constitution, and "brought his grey hairs in sorrow to the grave." Sir John's life was bound up in his affections, much of which was centred in his only son, Captain Hugh Burgovne, of the Royal Navy, who had early distinguished himself in the sister service, and who promised to cast fresh lustre on his father's name. Captain Burgoyne was devoted to his profession; he had served with great credit to himself in the Sea of Azof; he had gained an early promotion to the rank of Post-Captain, and he was one of the original recipients of the Victoria Cross. In the spring of 1870, he had been selected to take command of the new turret ship, the "Captain," the great experiment of the day, and one which there was every reason to suppose would prove completely successful. The "Captain" had already gone through one trial trip, had safely weathered a heavy gale of wind, and had given satisfaction to her commander and to all on board. In August. 1870, she sailed on another expedition with the Channel Fleet. On the 14th of September she was expected home; but on the 9th of that month the startling news arrived, that she had capsized on the 7th, in a gale of wind through which every other ship in the fleet had ridden in safety. All on board perished with the exception of nineteen sailors who escaped in one of the boats, and who were able to give melancholy details of the last moments of the captain of the ill-fated vessel. Sir John Burgoyne bore the sad news with the fortitude and resignation which he always showed under calamity; but the shock was overpowering to a man of eighty-eight, and from that moment he became a broken down invalid. From time to time, during the ensuing year, he rallied in some degree, but the spring of life was broken. Although incapable of bodily exertion, his intellect remained bright and unclouded to the last. He still took occasional interest in public affairs, and in the summer of 1871, when the debates in the House of Commons on the new Army Bill were taking place, he wrote a letter to "The Times" on Army Promotion, which attracted much notice, and was often quoted in both Houses of Parliament. This was, however, his last effort. His strength declined so gradually that until the very morning of his death his family had no idea of any immediate danger, and on the 7th of October, 1871, he expired without a pang or struggle, surrounded by those he loved, and smiling upon them to the last.

Many public men have been more admired, but none have been

more generally beloved, than Sir John Burgoyne. His kind and gentle manner, his benevolence, and his utter unselfishness, won the affection of all who became associated with him. No one ever applied to him for assistance without receiving kind sympathy, and as much aid as it was in his power to bestow. He was remarkable for his fondness for children and animals, and an act of cruelty to one or the other was the only thing that had power to Even at his great age, he retained all his ruffle his temper. sympathies with the young, and was ever forward in promoting their pleasures and amusements. The feeling commonly known by the term esprit de corps was a distinguishing characteristic in him. Next to his family, he loved and felt pride in his own corps, and never let an opportunity pass of promoting their welfare, whether individually or collectively. His modest and unassuming character was a drawback to his advancement through life. Duke of Wellington understood him well when he said, "If Burgovne only knew his own worth, there would be no one equal to him." He always thought it natural to see others preferred before himself, and never refused his assistance and advice, even when placed in a subordinate position where he had a right to hold the chief place. But with all his gentleness of disposition, the sterner qualities which command success in life were not wanting in him. He possessed in an eminent degree that high form of moral courage which never fails in moments of difficulty or danger, and he was always ready to assume the responsibility of actions entailing a possibility of disaster as well as of success; nor did he ever shrink from taking the responsibility of a failure upon The slightest deviation from truth, or anything aphimself. proaching to a subterfuge, was impossible to him. His firmness of character was remarkable: he was ever ready to listen to the arguments of an opponent, and his mind being free from prejudice. was always open to conviction; but having once resolved on the right course to pursue, no power could induce him to depart from His character cannot be better summed up than in the words of the Venerable G. R. Gleig, in the funeral sermon preached by him in St. James's Church on the 22nd October. spoke of his old friend as "one whose long career, extending over "a wider space than the allotted life of man, was without a spot "to which the finger of malice could point, or the most hostile "critic hold up to public censure. It was almost impossible to "converse with him without deriving benefit. Controversy or "disputation were odious to him: even in pointing out to a man "that he was wrong in argument, he did it so as not to lower

"him in his own estimation. He was a religious man, but his "religion was of a simple unpretending kind, looking for sal"vation only through the merits of his Saviour. His generous "heart will beat no more; his pure spirit has gone back to Him "who gave it, but he has carried to his resting-place in the "Tower the affectionate reverence of his countrymen and the "admiration of the world."

SIR JOHN FREDERICK WILLIAM HERSCHEL, Bart., K.H., D.C.L., F.R.S., &c., the only son of Sir William Herschel, the discoverer of the planet Uranus, was born at Slough on the 7th of March, 1792. He received his early education privately, under a Scotch mathematician named Rogers, and subsequently entered St. John's College, Cambridge, where he took his B.A. degree in 1813, coming out as Senior Wrangler and first Smith's Prizeman. In the same year he published his first work, "A Collection of Examples of the Application of the Calculus to Finite Difference." In 1819 he commenced a series of Papers, in the "Edinburgh Philosophical Journal," on miscellaneous subjects in physical science; and in 1822 communicated to the Royal Society of Edinburgh a Paper on the absorption of light by coloured media. In 1816 he began to examine the double stars, in continuation of his father's work, Sir James South being united with him in the undertaking from March, The results appeared in six Memoirs, the last of which was published in 1836. His catalogue (made at Slough) of nebulæ and clusters of stars is contained in the Philosophical Transactions of the Royal Society for 1833. Early in 1834 he removed with his family and instruments to the Cape of Good Hope, where he remained for four years, for the purpose of observing and cataloguing the double stars and nebulæ of the southern hemisphere. results were published, in one volume, by the munificent aid of the Duke of Northumberland, in 1847, and his general catalogue of nebulæ appeared in the Transactions of the Royal Society for 1864. On his return from the Cape, in May, 1838, he was made a baronet; and from December, 1850, to February, 1855, he occupied the post of Master of the Mint. The latter part of his lifetime was spent at Collingwood, near Hawkhurst, Kent, where he died on the 11th May, 1871. One who knew him well writes that he was "an excellent workman, and his lathe-room adjoining his laboratory and his study was in constant use. . . . He made a working model of all his contrivances; and this as much from a determination to work up from the beginning of everything, and to meet and con-