

Thomas Drummond (1797-1840)



Thomas Drummond, engineer, and administrator was born in Edinburgh on 10 October 1797. His father, James Drummond, was a member of the society of writers to the signet and the representative of a branch of a Scotch family of ancient lineage. James Drummond married in 1792 Elizabeth, daughter of James Somers of Edinburgh, a lady of personal attractions and great force of character. Thomas was the third child of this marriage. At the age of thirteen he entered the university of Edinburgh. Professor Leslie said of him: 'No young man has ever come under my charge with a happier disposition or more promising talents.' In 1813 he became a cadet at Woolwich, and in 1815 entered the royal engineers. Drummond's progress at Woolwich was rapid, and the esteem in which he was held by his teachers great. 'At the last examination,' he writes on 13 April 1813, 'I got from the bottom of the sixth academy to be fifth in the fifth academy, by which I took fifty-five places and was made by Captain Gow (the commanding officer) head of a room.' Professor Barlow spoke of his originality, independence, 'steady perseverance,' and kindliness of heart, which were distinguishing traits at every period of his life.

In 1819 Drummond became acquainted with Colonel Thomas Frederick Colby in Edinburgh, and in 1820 joined that officer in the work of the ordnance survey. Drummond was now twenty-three years of age, and he entered into his new labours with zeal. He devoted himself with increased energy to his favourite studies, mathematics, and chemistry, in which he made rapid progress under Professors Brand and Faraday at the Royal Institution. Among the difficulties felt in carrying out the survey the labour of making observations in murky weather was very great. This labour was minimised by the scientific genius of Drummond. His two inventions — a limelight, better known as 'the Drummond light,' and an improved heliostat, an instrument consisting of a mirror connected with two telescopes, and used for throwing rays of light in a given direction — immensely facilitated the work of observation both by day and night, and armed the survey officers with powerful weapons for carrying on their operations. The light soon made a sensation in the scientific world. Sir John Herschel describes the impression produced when the light was first exhibited in the Tower: 'The common Argand burner and parabolic reflector of a British lighthouse were first exhibited, the room being darkened, and with considerable effect. Fresnel's superb lamp was next disclosed, at whose superior effect the other seemed to dwindle, and showed in a manner quite subordinate. But when the gas began to play, the lime being brought now to its full ignition and the screen suddenly removed, a glare shone forth, overpowering, and as it were annihilating, both its predecessors, which appeared by its side, the one as a feeble gleam which it required attention to see, the other like a mere plate of heated metal. A shout of triumph and of admiration burst from all present.'

In 1824-5 the survey of Ireland commenced, and in the autumn of the latter year the light was brought into requisition. The triangulation commenced by observations between Divis mountain, near Belfast, and Slieve Snaght, the highest hill of Innishowen, a distance of sixty-seven miles. It was essential that a given point on Slieve Snaght should be observed from Divis, but though the work of observation was carried on from 23 August to 26 October the required point could not be sighted. Then the Drummond light was brought into play, with a result of which General Larcom has given a graphic account. Drummond's skill was also used in perfecting the Colby, or, as they are sometimes called, the Colby-Drummond compensation bars, by means of which the base of Lough Foyle — the most accurately measured base in the world according to Sir John Herschel — was measured.

In 1829 Drummond was engaged in rendering the limelight which he had discovered fit for lighthouse purposes. Experiments were tried to test its efficiency, and we have an account of the most important of these from an eyewitness. Several lights were exhibited from a temporary lighthouse at Purfleet in competition with the Drummond light, and Captain Basil Hall, who witnessed the exhibition, wrote to Drummond: 'The fourth light was that which you have devised, and which, instead of the clumsy word "lime," ought to bear the name of its discoverer. The Drummond light, then, the instant it was uncovered elicited a sort of shout of admiration from the whole party as being something much more brilliant than we had looked for. The light was not only more vivid and conspicuous but was peculiarly remarkable from its exquisite whiteness. Indeed, there seems no great presumption in comparing its splendour to that of the sun, for I am not sure that the eye would be able to look at the disc of such light if its diameter were made to subtend half a degree.'

The superior brilliancy of the light having been established, the cost of production was very great, and Drummond was engaged in devising means for lessening the expense of manufacturing gas, management, &c., when in 1831 he glided into politics. In that year Drummond met Brougham at the house of a common friend, Mr. Bellenden Ker. An intimacy soon sprang up between them. Other political acquaintances were by degrees formed, Drummond's worth was quickly recognised, and when the time came for appointing the boundary commission in connection with the great Reform Bill Drummond was made head of the commission. For his services in connection with the commission a pension of £300 a year was conferred on him, but with characteristic independence he declined after two years to accept it any longer. The business of the boundary commission over, Drummond's political friends resolved to keep him among them.

In 1833 he became private secretary to Lord Althorp, then chancellor of the exchequer. In 1835 he was appointed under-secretary at Dublin Castle, and entered upon his great work of the administration of Ireland. Drummond arrived in Ireland at a critical moment in the history of the country. The Catholic Emancipation Act of 1829 had not brought contentment in its train, because the administration of the law continued one-sided and unjust. Admitted by law to political posts, catholics were excluded in fact; and all political power still remained in the hands of the protestant ascendancy minority. Under these circumstances, O'Connell carried on an agitation for the repeal of the union from 1830 to 1835, and used his great influence in Ireland to thwart the executive and embarrass successive administrations. After the general election of 1835 O'Connell held the balance between the two great English parties, and finally threw his weight into the scale in favour of the whigs. With his aid the whigs, under Lord Melbourne, came into office, and a compact was practically made between the government and the Irish leader.

The basis of this compact — known as the Lichfield House compact — was that O'Connell should suspend the demand for repeal, and that the government should pass remedial measures for Ireland and administer the affairs of the country on principles of justice and equality. The Irish administration was nominally entrusted to Lord Mulgrave, the lord-lieutenant, and Lord Morpeth, the chief secretary, but Drummond was really in command.

He was practically the governor of the country, and for five years managed its affairs with wisdom, firmness, and justice, making the executive at once strong, popular, and efficient. Prior to his arrival Ireland was the scene of political agitation, social disorder, and religious feuds. The Orangemen, irritated and alarmed at the emancipation of the catholics, had formed an army of not less than two hundred thousand men to uphold the prerogatives of the dominant class. Orange processions and armed demonstrations terrorised Ulster and overshadowed the executive in Dublin. Catholic peasants struggled fiercely to overthrow the tithe system and fought pitched battles with the military and police. The agrarian war raged with wonted fury, faction fights disgraced the land, and O'Connell loudly called for the repeal of the union as the only remedy for his country's ills. Drummond was equal to the situation. While engaged on the ordnance survey he had studied the Irish question on the spot. He was moved by the miseries of the people, touched by the injustice to which they were subjected, and pained by the evidence of misrule which everywhere met his eye. Ireland became to him a second fatherland, and he entered upon his labours full of zeal for the national welfare and determined to administer the law with even-handed justice.

Drummond set out for Ireland on 18 July 1835. On 19 November following he married, in England, Miss Kinnaird, the ward and adopted daughter of Richard ('Conversation') Sharp, an accomplished, attractive, and intelligent woman, who entered into his labours with sympathy and zest. In December 1835 Drummond took up his residence at the under-secretary's lodge in the Phoenix Park, Dublin. His attention was first directed to the organisation of an effective police force. Prior to his time the police were an inefficient, partisan, and corrupt body. Catholics were practically excluded from the force, and public confidence in consequence withdrawn from it. 'Order' in Dublin was maintained by four hundred underpaid, worn-out, and drunken watchmen, while throughout the provinces the force formed rather a centre of disturbance than a security for peace. Under Drummond the four hundred Dublin watchmen were replaced by a thousand able and efficient constables, while that great constabulary force, now grown to ten thousand men, and composed chiefly of catholic peasants, was formed to justify the belief of Drummond that the peace could best be kept in Ireland by trusting Irishmen, when fairly treated, to keep it.

Drummond's innovation startled many minds, but an experience of seventy years has proved the soundness of his judgment. Drummond found the local magistrates as untrustworthy as the old police. In his own language he 'clipped their wings' by practically placing over them stipendiaries who acted directly under his authority. These stipendiaries administered the law with great justice and won the confidence of the people, hitherto withheld from the petty session courts. The Orange Society was almost supreme in the land, keeping alive the bitter feeling of sectarian hate. In Drummond's time the old Orange Society was completely broken up. Orange lodges which existed in the army were disbanded, secret signs and pass-words, then in use, were discovered and prohibited; Orange processions were put down, Orange magnates reprimanded, and the organisation entirely stripped of the power for mischief and disturbance which it had so long possessed. The notorious faction fights, which were of constant occurrence in the south, met with treatment of equal vigour. It had been the practice to allow the faction fighters to settle their differences among themselves. Drummond reprimanded the police for their listlessness, urged them to vigorous action, and under pain of dismissal ordered the chiefs to prevent the coming together of the opposing factions. Finding that the holding of fairs was made the occasion of many of those faction fights, he suppressed numerous fairs where the business was insignificant but the disorder great.

The tithe war was a great difficulty to Drummond. From 1830 to 1834 it had raged fiercely. Tithes were collected at the point of the bayonet, peasants were shot down and bayoneted by police, and police were stoned and pitchforked by peasants. Parliament had declared that the tithe system needed reform, but the church insisted that, pending reform, tithes should at all hazards be collected. Drummond set himself to keep the peace pending tithe reform. He refused to force six million catholics to pay tithes to the church of eight hundred thousand protestants while parliament was preparing to reform or abolish the tithe system. But he took precautions to protect from violence all who were engaged in exercising their legal rights. Police were no longer despatched as tithe collectors to shoot down peasants, but peasants were not allowed to assault or slay the agents of the law.

The executive no longer appeared as the instrument of a class, but it did not degenerate into a weapon of the popular party. This impartiality was new to the people and won their hearts. Legal rights harshly exercised were no longer enforced, and the people, finding an executive bent on justice, and powerful to protect as well as punish, showed a disposition, hitherto unknown, to obey the law. The peace was kept until the Tithe Commutation Act of 1838 reformed the system and relieved the peasantry from at least the direct payment of the obnoxious impost.

The agrarian war also engaged Drummond's attention. In 1833 a strong 'coercion' act had been passed to put down agrarian disturbances, but it had so far failed that in 1834 the lord-lieutenant declared that 'it was more safe to violate the law than obey it.' Drummond understood the land question in all its bearings. He was far too sound an administrator not to be aware that, whatever might be the causes of disturbance, law and order should be upheld and outrages put down with a strong hand. Abandoning the old methods, he enforced the ordinary law with vigour. The abandonment of coercion made him popular with the masses of the people, and even those who sympathised with the agrarian organisations forgot the severity in the justice of the ruler. For the first and only time in Irish history an organisation of Irish peasants was formed to help the executive in bringing agrarian offenders to justice, and this society was formed in the very centre of agrarian disturbances itself — Tipperary. There was no difficulty in getting evidence against agrarian offenders; there was no difficulty in getting juries to convict where the evidence was clear. While arresting and punishing offenders against the law, Drummond cautioned the landlords to be circumspect in the exercise of their legal powers, and in a famous letter, which has made an epoch in Irish history, told them that 'property has its duties as well as its rights.' The letter was an answer to a communication addressed to the Irish government in 1838 by Lords Glengall, Lismore, and thirty other Tipperary magistrates, relative to the murder of a Mr. Cooper. The magistrates pleaded for more stringent legislation for the suppression of crime. Drummond replied (22 May 1838) with the far-famed sentence, and he continued: 'To the neglect of those duties [i.e. of property] in times past is mainly to be ascribed that diseased state of society in which such crimes take their rise.'

Drummond had to grapple with political agitation as well as social disorders and religious feuds. O'Connell had long been the enemy of every Irish administration. But Drummond conciliated the great agitator, and while he ruled the cry of repeal was silent. O'Connell felt that no ruler responsible to an Irish parliament for the administration of the country could govern with more ability and justice than Drummond. Accordingly, he lent the weight of his authority to the support of the executive, and the extraordinary spectacle was for the first time seen of Irish agitator and English administrator working hand in hand to maintain order and uphold the law. No better proof of Drummond's success can be given than by stating that the number of troops in the country two years before his arrival was 23,998; the number when he ceased to rule 14,956, the number seven years after he had ceased to rule 28,108.

Drummond devised schemes for the development of the resources of the country and the employment of the poor. At his suggestion a railway commission, over which he presided, was appointed (October 1836), and proposals were made for the construction by the state of trunk lines from Dublin to Cork, with branches to Kilkenny, Limerick, and Waterford, and from Dublin north to Navan, branching to Belfast and Enniskillen. Unfortunately, owing to political and private jealousies, Drummond's scheme was not carried out. But time has justified his foresight and wisdom in the transaction, and his calculations as to the paying capabilities of the different routes have been singularly verified. Of the work of the commission it has been said 'the labours of the commissioners were most arduous; their report, with the evidence on which it was founded, and the explanatory maps and plans which accompanied it, is one of the ablest ever submitted to parliament.' Of the minor work done by Drummond for Ireland the municipal boundaries commission, the abolition of the hulks at Cork, and the suppression of the disgraceful Sunday drinking booths in the Phoenix Park, Dublin, may be mentioned. Nor should it be forgotten that Drummond was the first man who threw open the doors of Dublin Castle to all comers. Each day he held a levée, to which peer and peasant, landlord and tenant, catholic and protestant could come on equal terms. The gift of conciliation was perhaps the greatest charm of Drummond's character. Before he came to Ireland the Duke of Leinster declared that he would never meet O'Connell; but at Drummond's instance the great duke and O'Connell met on a common platform to promote Drummond's schemes for the welfare of their common country. Drummond was attacked by a faction, and a parliamentary committee was appointed to show that crime had increased under his administration. The upshot of this inquiry was a splendid vindication of his government.

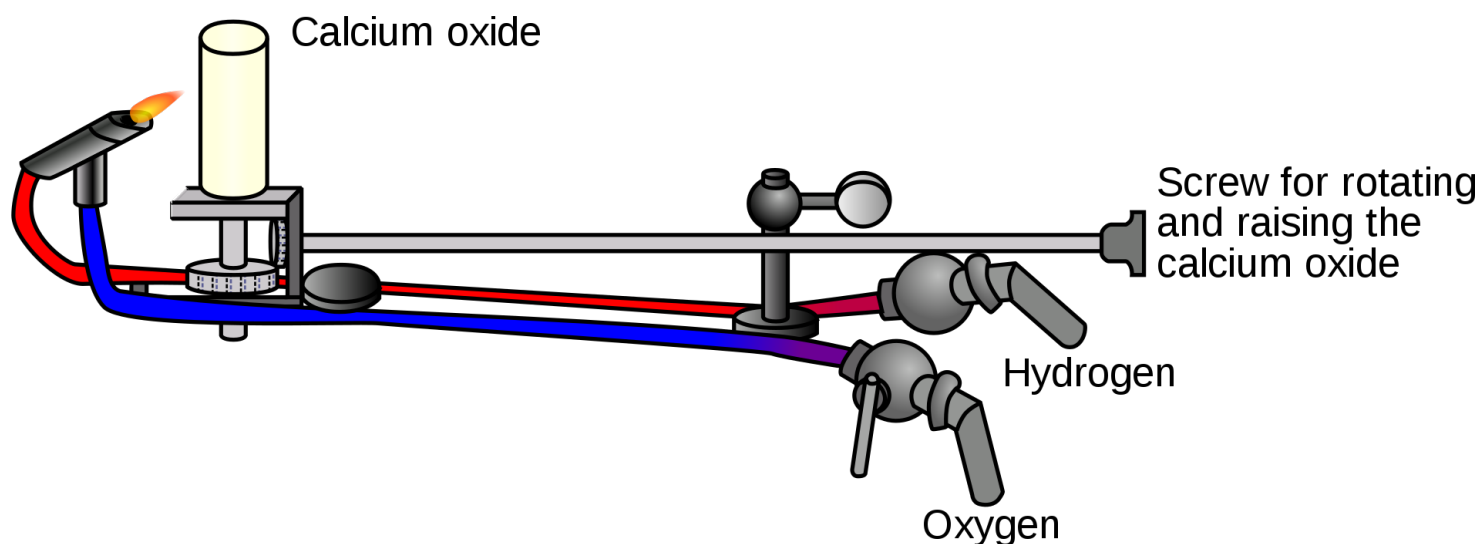
'The inquiry,' says Lord John Russell, 'ended by proving that crime had diminished, and that the increased security for property was demonstrated by this most conclusive test, that five years' more purchase was given for land in 1839 than had been given for seven years' before.' During Drummond's rule, we learn from another authority, Chief Baron Pigott, 'homicide diminished 13 per cent., firing at the person 55 per cent., incendiary fires 17 per cent., attacks upon houses 63 per cent., killing or maiming cattle 12 per cent., levelling houses 65 per cent., illegal meetings, 70 per cent.' In fact, the character of Drummond's government has been summed up in a single sentence by Sir William Somerville, an influential landlord, proprietor, and afterwards chief secretary to the lord-lieutenant. 'What I remark,' he says, 'in Ireland at present [1839] with the greatest satisfaction is the growing feeling of respect for the law.'

Drummond sank beneath the work he had undertaken. He devoted all his energies to public affairs, and he died in the public service. Mrs. Drummond says in 1838: 'I often say that I might as well have no husband, for day after day often passes without more than a few words passing between us.' And 'from last Monday until this morning, a week all but a day, he never even saw his baby, although in the same house with her. ... He is very thin and very much older in appearance than when you last saw him.' Drummond was then suffering from his labours in connection with the railway commission. In 1839 his health became worse, and for a short time he sought rest and change of scene. But in February 1840 he returned little better to Ireland and resumed his duties. After working nine hours at his office on Saturday, 11 April, he was taken ill on Sunday, and died on Wednesday, 15 April. He was not allowed to see his children and left a bible for each as 'the best legacy' he could give. He left a message, telling his mother that he remembered her instructions on his deathbed. He requested to be buried in Ireland, the land of his adoption, and in whose service, he had lost his life.

He was buried at Mount Jerome cemetery, Harold's Cross, Dublin, on 21 April 1840. Though the funeral was intended to be private, it partook of a public character. It was attended by almost every person of importance in the state or city. The whole populace joined in the procession. In 1843 a statue, executed by the Irish artist Hogan, was erected by public subscription to Drummond's memory, and placed in the City Hall, Dublin. Drummond left three daughters: Mary Elizabeth, who in 1863 married Mr. Joseph Kay, Q.C., author of 'The Social Condition and Education of the People of Europe,' and 'Free Trade in Land'; Emily, and Fanny, who died in 1871.

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Limelight (also known as Drummond light or calcium light) is a type of stage lighting once used in theatres and music halls. An intense illumination is created when an oxyhydrogen flame is directed at a cylinder of quicklime (calcium oxide), which can be heated to 2,572 °C (4,662 °F) before melting. The light is produced by a combination of incandescence and candoluminescence. Although it has long since been replaced by electric lighting, the term has nonetheless survived, as someone in the public eye is still said to be "in the limelight". The actual lights are called "limes", a term which has been transferred to electrical equivalents.



History



Heating calcium hydroxide (slaked lime) in a stove burner causes it to glow, although this is not as bright as a real limelight. The limelight effect was discovered in the 1820s by Goldsworthy Gurney, based on his work with the "oxy-hydrogen blowpipe", credit for which is normally given to Robert Hare. In 1825, a Scottish engineer, Thomas Drummond (1797–1840), saw a demonstration of the effect by Michael Faraday and realized that the light would be useful for surveying. Drummond built a working version in 1826, and the device is sometimes called the Drummond light after him. The earliest known use of limelight at a public performance was outdoors, over Herne Bay Pier, Kent, on the night of 3 October 1836 to illuminate a juggling performance by magician Ching Lau Lauro. This performance was part of the celebrations following the laying of the foundation stone of the Clock Tower. The advertising leaflet called it koniaphostic light and announced that "the whole pier is overwhelmed with a flood of beautiful white light Limelight was first used for indoor stage illumination in the Covent Garden Theatre in London in 1837 and enjoyed widespread use in theatres around the world in the 1860s and 1870s. Limelights were employed to highlight solo performers in the same manner as modern followspots (spotlights). Limelight was replaced by electric arc lighting in the late 19th century.