1 – Cut-glass celery vase, c.1830, with fan-like scalloped rim and panels divided by split bands. Celery vases such as this one were made at the Waterford glassworks.
(courtesy National Museum of Ireland, registration no. 1956.76)

Selling Waterford glass in early nineteenth-century Ireland

ANNA MORAN

A COLLECTION OF BUSINESS RECORDS AND CORRESPONDENCE ASSOCIATED WITH the Waterford glassworks has shed new light on the inner workings of this well-known glasshouse. Analysis of these records, held by the National Museum of Ireland, provides a detailed insight into the design, production and sale of glass at the Waterford glasshouse during the early nineteenth century. They also facilitate a re-evaluation of traditionally nurtured views which present the Waterford glasshouse as predominantly a producer of highly sought-after luxury cut glass, which it successfully made and sold until excessive excise duties levied by the British government brought about its demise.[1] This study, which focuses on how they sold their wares, highlights the difficulties they faced in selling their luxury cut glass, forcing them to rely on the sale of their plainer and cheaper goods. The ways in which the glasshouse sought to increase its sales at a time of severe economic hardship reveals a picture which is more complex than that commonly presented.

HISTORY AND SOURCES

The Waterford glassworks was in operation between the years 1783 and 1851. It was set up by the Quaker merchants George and William Penrose, who, like other entrepreneurs at the time, benefited from the premiums which were available to Irish glassmakers. Premiums came in the form of grants awarded by the Irish parliament through the Dublin Society, 'for the encouragement of manufactures, particularly glass manufacture'.[2] The year 1780 saw the removal of restrictions on the exportation of glass from Ireland, which had been in place since 1746. Further encouragement was provided by the Act of 1781-82, which removed the duty imposed on coal when used in glass manufacture.[3] George and William Penrose,

with the assistance of John Hill and a team of glassmakers from Stourbridge invited over to work for them, established the glasshouse on the quay in Waterford.[4] During the 1780s, the Waterford glasshouse was one of seven glassworks manufacturing flint glass in Ireland. By 1833 it was one of eight concerns in Ireland, each of them sited close to a port from where they could export their goods.[5]

Following the death of William Penrose in 1799, ownership passed into the hands of a partnership comprised of Jonathan Gatchell, Ambrose Barcroft and James Ramsey. Upon the dissolution of this partnership in 1811, Jonathan Gatchell became the full owner. Following the death of Gatchell in 1823, as the instructions of his will set out, the glassworks was placed in the hands of a partnership until 1835, when George Gatchell, Jonathan's youngest son, came of age. While the exact composition of the partnership changed over the period, it principally comprised members of Jonathan Gatchell's immediate family: his daughter Elizabeth Walpole, and her husband Joseph Walpole, together with Jonathan's brother-in-law Nehemiah Wright, who acted as trustee for the partnership, as well as Nehemiah's son Jonathan who managed the glasshouse between 1831 and 1835.

The name of Waterford is synonymous with heavy, richly cut glass, and resonates with luxury associations and a design identity which has come to symbolise the highest degree of traditional Irish skill and craftsmanship. The perception of the Waterford glasshouse is so prominent that vast amounts of early nineteenth-century cut glass are attributed to the Waterford glassworks when in fact only a fraction of it could possibly have been made in Waterford. This was commented upon in 1920 by M.S.D. Westropp (1868-1954) in his seminal publication on Irish glassmaking.[6] Similarly, the glass scholar Hugh Wakefield was keen to point out that early nineteenth-century Ireland, as home to a very small number of glasshouses, only ever produced a small proportion of the total amount of cut glass produced in the British Isles.[7] In spite of Wakefield's research – supported by other glass scholars of authority – the tendency to describe all cut glass indiscriminately as Irish or even as 'Waterford' persists to this day.[8]

The surviving records, which comprise a collection of letters, account books and patterns, were sourced in the early years of the twentieth century by M.S.D. Westropp.[9] The majority of the letters, known as the Gatchell Letters, date to the early decades of the nineteenth century and were principally written between various members of the Gatchell, Walpole and Wright families, who together ran the glassworks.[10] The drawings, done in the 1820s and 1830s, are thought to have been executed by Samuel Miller, foreman of the glasscutters at the Waterford glassworks.[11] The drawings give an insight into the assortment of objects produced, which included a wide range of decanters, goblets, celery vases and sugar bowls (Plates 1-4).[12] The designs also act as evidence that the Waterford glassworks was producing glass

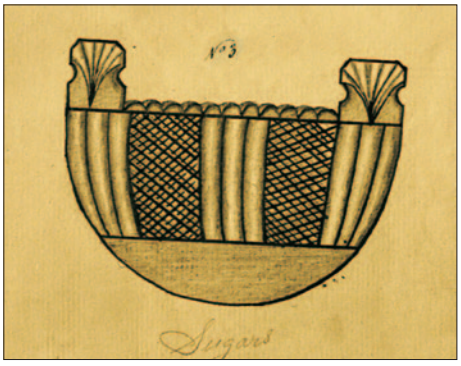
in the same richly cut style dominant in the products of all the major glasshouses in the British Isles. The innumerable permutations of lines cut at different angles, leaving protrusions of varying relief, was made possible through use of a steam engine which powered the lathes at a faster and more even rate than had been possible with hand-turned lathes. The use of steam power in glass cutting was first introduced during the last decade of the eighteenth century.[13] While somewhat later than other glasshouses, the managers of the Waterford glassworks did invest in a steam engine in the mid-1820s, ensuring that they would be able to produce glass equal to that made elsewhere.[14] Evidence that their designs compared favourably with those of others is provided by the fact that they were awarded silver medals at both the 1835 and 1836 exhibitions of manufactures at the Royal Dublin Society.[15]

The surviving account ledgers, also dating to the 1820s and 1830s, facilitate analysis of the business organisation which sustained their manufacturing activities.[16] Outgoing payments for materials, labour, equipment and fuel, combined with incoming revenue from the many retailers who purchased glass on a wholesale basis, facilitate analysis of the complex and geographically wide networks of supply and distribution on which the business was based. Also present within the accounts are the regular payments made in accordance with the excise duty. It is this duty which has been blamed for the decline of the Irish glass industry.

THE DECLINE OF THE IRISH GLASS INDUSTRY DURING THE EARLY NINETEENTH CENTURY

Contrary to traditional thinking, the economic impact of the Act of Union of 1800 was not quite as immediately deleterious as previously claimed.[17] As pointed out by David Dickson, Dublin enjoyed a period of wartime prosperity, and the 'prophesised exodus' of peers and upper-class families was not quite as sudden as expected.[18] Any rise in gentry absenteeism was compensated for by an increased military presence, and high prices for agricultural produce benefited farmers and landlords.[19] Research on the assay records of the Dublin Assay Office reveals that the volume of silver produced in the city in 1810 remained substantial.[20] Similarly, the cabinet maker John Mack, later a partner in the firm of Mack, Williams & Gibton, received many significant institutional commissions during the early years of the nineteenth century and during this period his business expanded.[21]

Economic decline did, however, set in at the end of the Napoleonic wars, and the period 1816 to 1818 witnessed food shortages not just in Ireland, but also in Britain and Europe.[22] The economic gloom which presided saw a drop in the prices of manufactured goods, setting the scene for further decline during the 1820s and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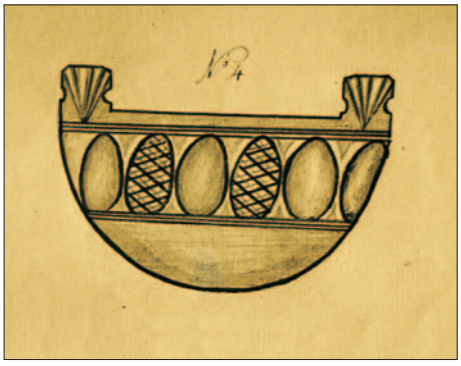
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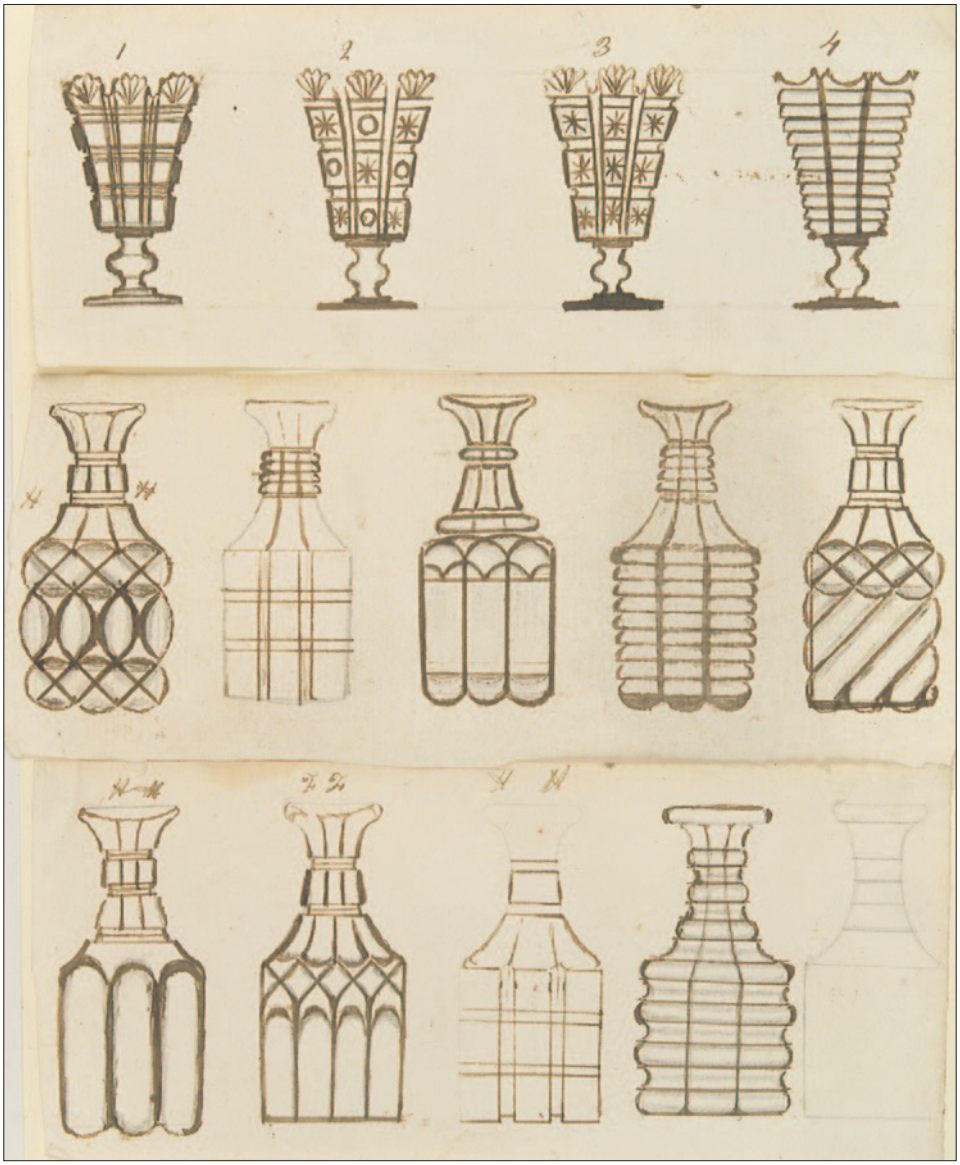


4 – One of the Samuel Miller drawings, said to have been used at the Waterford glasshouse during the 1820s and 1830s. This sheet featuring designs for celery vases in the top row and decanters in the two rows below (courtesy NMI)

opposite

2 – Cut-glass sugar bowl and stand: the heavy style of cutting dates this piece to the late 1820s or early 1830s. Sugar bowls and stands of this design were made at the Waterford glassworks. (courtesy NMI, registration nos 1886.60 and 1886.61)

3 – Samuel Miller drawings of two sugar bowl designs (courtesy NMI)

1830s.[23] During this period of recession, glassmakers in Ireland felt particularly aggrieved. Without a native source of coal which could fire their furnaces to the correct degree, the Irish glassmakers were forced to import their fuel. High transportation costs saw the price of coal quadrupling between the coal mine and the Irish coast.[24] Sand, lead, saltpetre and potash, together with clay for making pots to contain the molten glass in the furnace, had to be imported by the Irish glassmakers. This resulted in much higher production costs than those incurred by their English counterparts.

Hopes of compensating for high production costs through trade with Britain were somewhat hampered by increasing duties on glass exported between England and Ireland.[25] Glass exported from Ireland was subject to a 10% duty, together with countervailing duties equivalent to the excise duty paid on glass manufactured in England. Whereas English glassmakers were eligible to receive a bounty known as a 'drawback' on glass exported, Irish glassmakers were not.[26] Their pleas to be allowed this bounty are recorded in the *Appendix to Twelfth Report of Commissioners of Inquiry into the Revenue arising in Ireland, Scotland &c*.[27] During the years 1825-26, the excise duty was extended to Ireland. This came about partly due to the pressure exerted by the Irish glassmakers. It also represented an attempt to eradicate illicit glasshouses in Ireland known to be making substandard glass which was then smuggled into England and Scotland.[28]

Unfortunately, the extension of the excise duty to Ireland did not have the desired effect, and a parliamentary report of 1835 records the despairing requests to have the duty removed.[29] The repeal of the duty in 1845 did little to revive the industry, which had suffered greatly in the face of intense competition from Belgian and Bohemian glasshouses. The Waterford glassworks closed in 1851, and by 1852, of the eight flint glasshouses at work in Ireland in 1833, only two survived – one in Belfast and one in Dublin. In attempting to account for this decline and to apportion blame, many writers have taken a patriotic stance. Writing in 1984, Ida Grehan wholeheartedly blamed the taxes imposed by the British government:

> The Waterford glasshouse had come to a peak of perfection with international recognition when the Act of Union and heavy taxes levied to pay for England's overseas battles destroyed the glass industry. The furnaces which had transformed Waterford from the name of a city port on the river Suir to an Irish myth were quenched, and the glass-blowers and engravers sadly scattered.[30]

While the excise duties did have a restrictive and damaging effect on the Irish glass industry, its decline cannot be wholly attributed to the extension of the excise duty. Moreover, an approach not determined by national pride, but rather one which takes account of the broader social and economic context, reveals that the duties were part of a wider, more complex set of interrelated social and economic factors which

impacted on the glass industry. One crucial factor which must be addressed is the nature of the Irish market during the early nineteenth century.

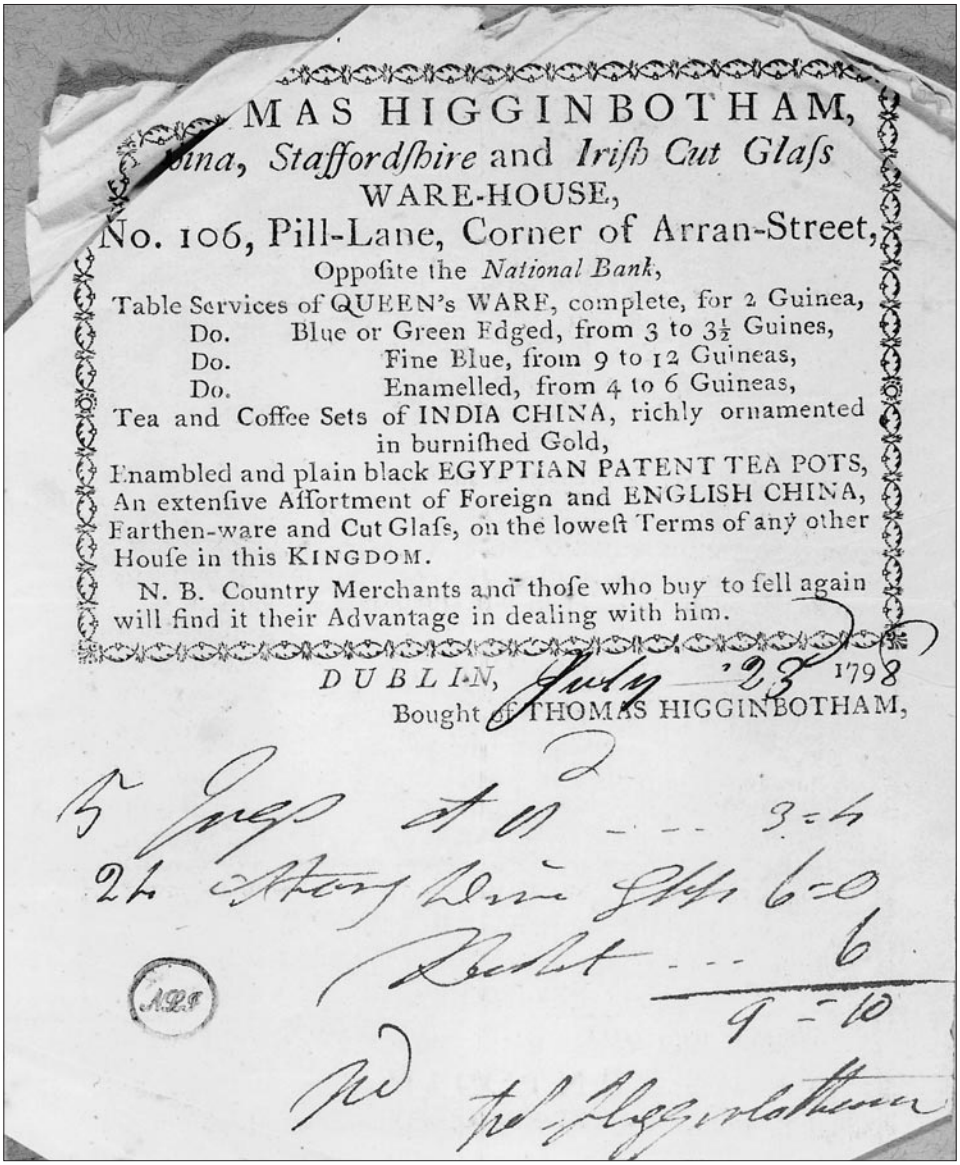
THE MARKET FOR IRISH GLASS IN EARLY NINETEENTH-CENTURY IRELAND

In 1833, the Dublin glassmaker Martin Crean stated in his plea to the commissioners of the *Thirteenth Report of Excise Inquiry*, 'the duty is much felt on the low priced articles which the Irish manufacturers make, for generally speaking all the rich cut goods come from England'.[31] Irish glassmakers found that the excise duty payable on each piece of glass manufactured increased the retail price they needed to charge in order to make a profit. This left them unable to compete effectively with the cheaper British glass which flooded the Irish market. The impression gained from the evidence presented is that cheaper, plainer articles provided the bulk of their trade. This was accounted for by the apparent preference of Irish consumers of the more expensive objects for imported rather than Irish glass. The Ronayne brothers, proprietors of the Terrace Glassworks in Cork, echoed the testimony of Martin Crean:

> We make, at present moment, but half what we made before the duty was imposed. There being, generally speaking, no opulence amongst us, the great demand was for ordinary glass: the duty has so enhanced the price, that the great bulk of the people have substituted common English ware, and tin articles of all descriptions ... Here then a great class of consumers are swept away from the manufacturer; the few consumers of a better description of glass being, for the greater number; an impoverished gentry, who still reside amongst us, are supplied from England and Scotland, where capital is so assisted by cheaper fuel, and all other materials in the manufacture.[32]

It must be acknowledged that such sentiments were presented in a legislative and official context where testimonies may have been embellished in the hope of having the duty removed. Nevertheless, the study of newspapers, inventories and diaries of Irish consumers reveal that a preference for imported over native-made goods was an established characteristic within the buying patterns of those purchasing luxury goods in eighteenth-century Ireland.[33] Clearly, the dictates of choice for such consumers were fashion and novelty, while consumers of cheaper utilitarian goods shopped with economy and function in mind.

Irish consumers of the more expensive goods were discerning in their choice, ensuring that their wares would communicate the correct messages. Out of necessi-

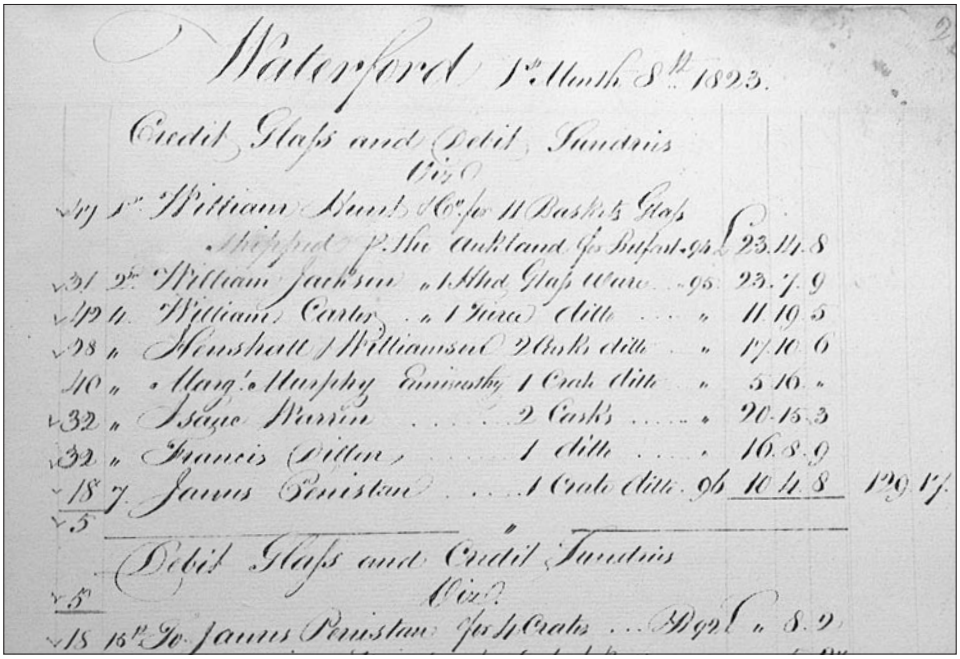

MAS HIGGINBOTHAM,
ina, Staffordſhire and *Iriſh Cut Glaſs*
WARE-HOUSE,
No. 106, Pill-Lane, Corner of Arran-Street,
Oppoſite the *National Bank*,
Table Services of QUEEN's WARE, complete, for 2 Guinea,
Do. Blue or Green Edged, from 3 to 3½ Guines,
Do. Fine Blue, from 9 to 12 Guineas,
Do. Enamelled, from 4 to 6 Guineas,
Tea and Coffee Sets of INDIA CHINA, richly ornamented in burniſhed Gold,
Enambled and plain black EGYPTIAN PATENT TEA POTS,
An extenſive Aſſortment of Foreign and ENGLISH CHINA,
Earthen-ware and Cut Glaſs, on the loweſt Terms of any other Houſe in this KINGDOM.
N. B. Country Merchants and thoſe who buy to ſell again will find it their Advantage in dealing with him.
DUBLIN, July 23 1798
Bought of THOMAS HIGGINBOTHAM,

5 – Bill for jugs and 'strong wine glasses' bought by the Earl Fingall on 23 July 1798 from Thomas Higginbotham's China, Staffordshire and Irish Cut Glass Warehouse (courtesy NLI)

opposite

6 – Page from an account ledger listing various retailers and the quantities of glass purchased by each of them from the Waterford glassworks on 1 January 1823 (courtesy NMI)

7 – Billhead of William Jackson, The Kings China Warehouse, dating to 1831 (courtesy NLI)



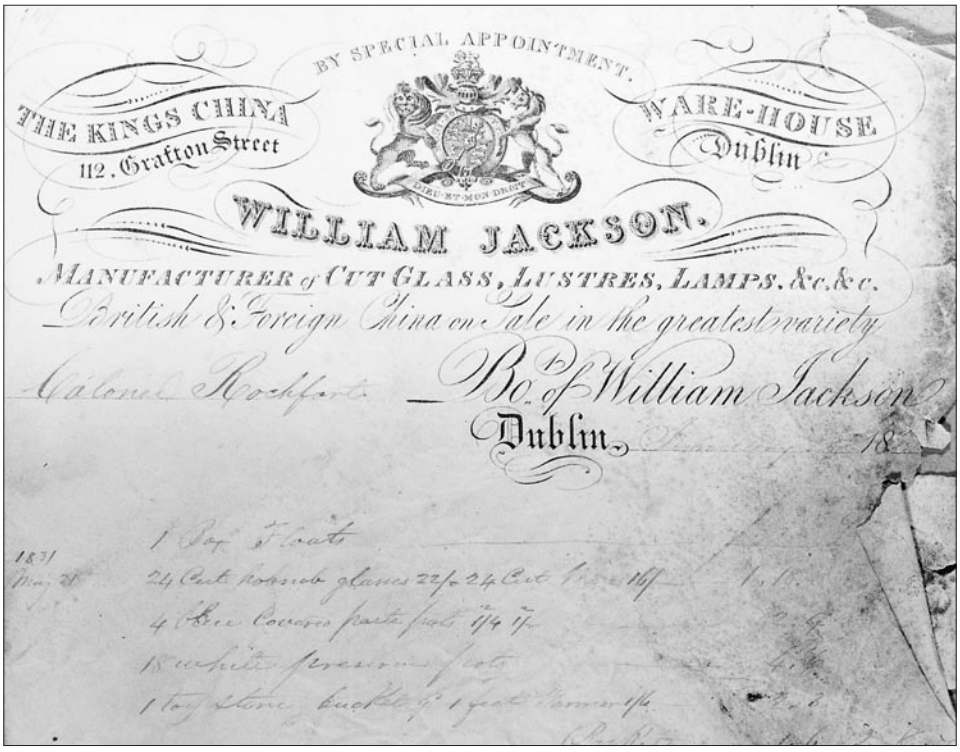
Waterford 1st Month 8th 1823.

Credit Glass and Debit Sundries
Viz?

29	1st	William Hunt & Co.	per 11 Baskets Glass Shipped per the Ankland for Belfast	95	£	23. 14. 8	
31	2d	William Jackson	" 1 Hhd Glass Ware	95		23. 7. 9	
29	4	William Carter	" 1 Firkin ditto	"		11 19 5	
28	"	Marshall & Williamson	2 Casks ditto	"		17 10 6	
30	"	Mary & Murphy Enniscorthy	1 Crate ditto	"		5 16 "	
32	"	Isaac Warren	2 Casks	"		20 15 3	
32	"	Francis Dillon	1 ditto	"		16 8 9	
18	7	James Penistan	1 Crate ditto	96	10 4 8		129 17
5							

Debit Glass and Credit Sundries
Viz?

5							
18	15th	Jo.	James Penistan for 4 Crates	Dr	£	8. 9	



ty, retailers provided as wide a variety of goods as possible. A bill for goods bought by the Earl of Fingall on 23 July 1798 from Higginbotham's China, Staffordshire and Irish Cut Glass Warehouse illustrates this point (Plate 5).[34] Their billhead details the fact that they sold not only Irish glass, but also 'an extensive assortment of foreign and ENGLISH CHINA, Earthenware and Cut glass'.[35] Clearly, Irish glass was sold alongside the products of the more ideally sited English glasshouses, and in awareness of their competition, Irish glassmakers sought to convince their consumers that their variety of glass was 'for excellence of quality ... equal to any made in England'.[36] As pointed out by Edward Wakefield in 1812, the use of British glass was 'prevalent in Ireland' despite the fact that it was often more expensive.[37]

In an advertisement placed in June 1808, the Dublin-based John Kennedy, 'agent to the Waterford glassworks', was keen to point out that he would also be selling Derby china at his next auction.[38] For the purpose of the advertisement he goes as far as changing the name of his warehouse to the Waterford Glass and Derby China Warehouse.[39] William Jackson of 112 Grafton Street also bought glass on a regular basis from the Waterford glassworks (Plate 6).[40] However, a billhead dating to 1831 indicates that William Jackson also offered 'British and Foreign China on sale in the greatest variety', showing that he also sought to meet the demand for imported wares (Plate 7).[41]

Industry became increasingly focused in Ulster, and in a bid to improve the industrial potential of the rest of the country, initiatives were taken to improve communication. In this aim, the Dublin and Liverpool Steam Navigation Company was established with Irish Quaker capital in 1824.[42] However, in the short term this only acted in facilitating the import of a greater quantity of British goods at a faster pace. Efforts to promote the consumption of Irish manufacture, which had begun in the eighteenth century, were stepped up in the 1840s with the formation of the Irish manufacture movement.[43] Such developments, however, which tended to focus on textile industries, did not create a new demand for Irish glass.

The impression gained from the primary sources is that during the early nineteenth century, the market for glass made at Waterford did not radically exceed that for glass from any other Irish glasshouse. That said, while there is no indication from the Gatchell Letters that the proprietors believed their produce was considered superior or to be in any greater demand than that of their rivals, the Quakers who owned and ran the Waterford glassworks were proud of their reputation as honest traders, good employers and manufacturers who had the ability to produce glass equal to any other. As Quakers, they were able to avail of a wide network of contacts in England and Ireland. The latest patterns being used in England and Scotland were sourced with speed, and news of any change in the prices being charged by rival glasshouses quickly reached Waterford.

Evidence that the problems experienced by the glassmakers who testified to the commissioners of the *Thirteenth Report of Excise Inquiry* were also experienced by those at the Waterford glasshouse is apparent upon reading the Gatchell Letters. In a letter to his father, dated 9 September 1832, Jonathan Wright, manager of the glasshouse between 1831 and 1835, despaired at the current state of the business:

> the present prospects of the business are indeed by no means encouraging except two good orders last week one from Jason Penistan, Kilkenny and the other per Walsh of Wexford there has been very little doing either at the shop or the glasshouse and still there is the weekly accumulation of cut goods.[44]

Concerns regarding the cut glass which was accumulating in their stockrooms are noted repeatedly in the letters which were exchanged between various members of the Wright and Walpole families, who together managed the glasshouse. Following capital investment in a steam engine to power the cutting lathes, and the employment of Samuel Miller, a foreman of the glass cutters, the glasshouse managers were loathe to decrease production before the steam engine had paid for itself. While the letters testify to the great difficulties faced, also apparent is a paternal responsibility for their employees. This is combined with an optimistic hope that the economy would improve, that the duty would be reduced or eliminated, that sales would increase, and their financial position would recover.

Ensuring that one's product, in terms of quality and price, was able to compete against that of others in the free market was not enough to guarantee that the Waterford glassworks would survive longer than the other glasshouses, forced to cease production during the 1830s and 1840s. Particular selling strategies, such as advertising, marketing, tactical stock management and the provision of a pleasurable environment in which to shop, were utilised and developed.

The sources reveal that the glass was sold in a variety of ways. These included the sale of glass direct to retailers and merchants in Ireland and England, and further afield in locations such as Newfoundland, Philadelphia and New York. Of no less importance was their salesman, George Saunders, who travelled the country loaded with baskets and casks of glass.[45] However, the primary focus here is on their retail establishment, known as the ware room, run in conjunction with the glassworks, and their particular use of the tactical strategies of selling mentioned above.[46]

THE WATERFORD GLASS WARE ROOM

During the second half of the eighteenth century, the city of Waterford witnessed significant development. A growth in agricultural activity had led to a burgeoning

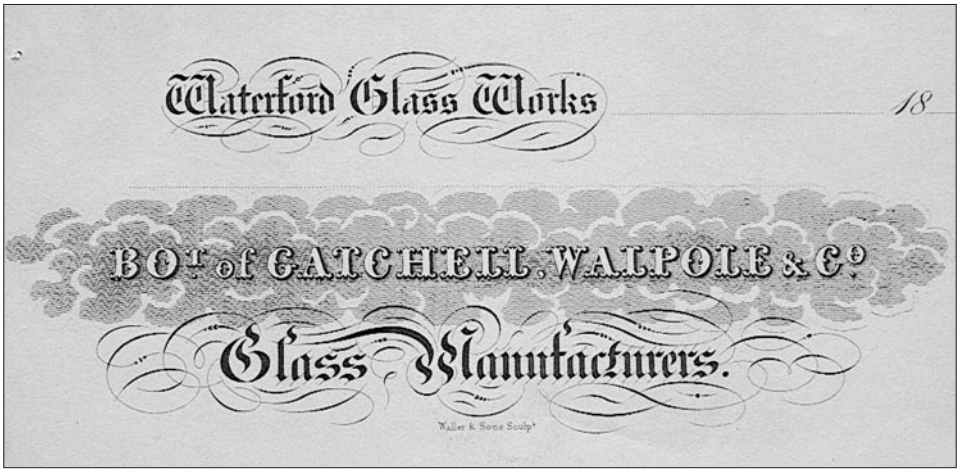
provisions trade with Newfoundland, making the port of Waterford the third busiest in the country.[47] With the aid of both mercantile and corporation funds, successive building projects were begun in 1705 and the quay was lengthened beyond the constricting medieval town walls, allowing the city to expand. The quay, compared in 1834 by the English traveller and social commentator Henry D. Inglis to the quay of the Saône at Lyons, featured a wide gas-lit promenade ideal for strolling shoppers.[48] The ware room is listed as No. 14 Merchants' Quay; however, it is worth noting that the quay was home not to one, but three shops from which glass could be bought.[49] Further competition was provided by the so-called Temple of Fancy, also on the quay. This last-mentioned concern, housed at Sharpe's Large Lounge Rooms, was a temporary outlet for Monsieur Ely when he arrived from Bristol in the summer of 1835 with a shipment of 'fancy goods' from Paris and Geneva.[50] French goods were often seen as more fashionable than English goods. This is hinted at in the description of one Dublin heiress as 'smoaking hot with fashion and elegance from Paris'.[51]

Commentators writing in the 1820s and 1830s, including Thomas Wyse, who wrote specifically in relation to the Waterford region, wrote angrily about the lack of support for native industry.[52] Other writers wrote of the squalor which hid behind the beauty of the quay, and in 1835, Robert Graham, a Scottish Whig touring Ireland, wrote that in Waterford city, 'they seem to have scarcely any manufacture or establishment for employing the people, except those concerned with the sale of corn and cattle'.[53] However, two days later, on 15 June, he went to survey a glassworks which he described as 'almost the only manufacture in Waterford'. [54]

With very little manufacturing in the town, the presence of the glasshouse, which in 1839 employed seventy people, was important to the industrial profile of Waterford city.[55] A range of imported goods – from the very cheap goods off-loaded as dead stock through auction, to the more expensive wares desirable in their foreignness – provided intense competition for those at the Waterford glass retail establishment. The ways in which the glasshouse managers responded to the challenge will now be addressed.

ADVERTISING AND MARKETING

In comparison with retailers of other products, such as textiles, ceramic and glass retailers advertised in newspapers less frequently. Nevertheless, newspapers provide a very important source of information about the glass trade. Samuel Alker, the Dublin-based retailer of 'China, Glass, Japan and Plated ware', advertised on 6 January 1808 in *Saunders' Newsletter and Daily Advertiser*.[56] He emphasised his ability, through contacts in England, to provide a vast assortment of goods at the lowest prices, boast-



8 – Billhead used at the Waterford Glassworks between 1830 and 1835 (courtesy NMI)

ing of 'having almost every pattern in the United Kingdom' at his warehouse and galleries. While the rhetoric suggests the possibility of extensive credit and a pleasurable environment in which to shop, the most important piece of information of which Alker informs his public is his change of address for his wholesale customers.

It is likely that ceramic and glass retailers also relied on the familiar techniques of the distribution of trade cards and circulars. The survival of a trade card and trade circular provides evidence that managers of the Waterford glassworks were engaged in what was at the time a common business practice. While these items of ephemera do not illustrate pieces of glass, a surviving billhead does illustrate their logo during the 1830-35 period (Plate 8). Hand-distribution of trade circulars facilitated not only the personal communication, which was so important during this period, but also allowed the salesman to collect invaluable information on the nature of the market.

Referring to glass which had been sent to Dublin to be sold through his father's linen shop, Jonathan Wright wrote to his brother who worked in the Dublin shop: 'I have often wished to know how you get on – how the goods have been answered & what progress they make in selling.' [57] Later in the same year Jonathan Wright emphasised that 'it seems now necessary more than ever that an active and stirring canvas should be kept up as well as to ascertain the circumstances of customers as to learn the terms other houses sell at'.[58] By keeping a close eye on how their goods were selling in Dublin, they were able to make informed decisions regarding the choice and price of the objects they sold, both on a wholesale basis and through their retail ware room in Waterford.

As referred to above, expertise and personal communication were crucial to the sales service required by eighteenth- and early nineteenth-century consumers. Consumers visiting the retail ware room at Waterford would have been attended to by trained staff – implied by a reference which is made to training George Gatchell for work in the ware room.[59] Perhaps he was being trained in the 'Art of Selling', referred to by William Johnstone, the sales assistant of the glass retail shop in Liverpool, in a letter dated 26 February 1856,

> I have been grinding away at the goods in the endeavouring to fix them in my memory rather than refer to a book which I carry in my pocket. I have managed that part of it now very well ... what I have to learn now is the Art of Selling which I have yet to acquire.[60]

The Waterford ware room advertised that it sold on a ready-money basis, which meant that every object should have had a price for the sales assistant to memorise, just as William Johnstone was being forced to do. This reduced the need to haggle over prices, and possibly made it more accessible to a wider range of clientele. However, if customers were ordering large quantities or a bespoke service, for example, price negotiations might have taken place in the 'back parlour' with food and/or drinks. In 1835 Jonathan Wright wrote angrily to his brother saying that their shop assistant had 'the effrontery to send a note saying she was entitled [to recompense] on account of entertaining customers and as a customer to two services of glass these might amount to £30'.[61] The 'back parlour' was specifically mentioned as being part of the shop in the dissolution of the partnership, and was evidently an important area.[62]

Advertising and marketing were vital interrelated components of the selling experience, both very dependent on personal communication and word of mouth. An ever-present element within the rhetoric of many retailer's advertisements was the elegance of their establishment over all others, acknowledging the attention paid to design in the creation of a space in which consumers would enjoy making their selection. Clearly, the appearance, both the exterior and interior, was of considerable importance in terms of catching the attention of passing shoppers, and was thus crucial to the formation of a strong business identity.

SHOP DESIGN AND BUSINESS IDENTITY

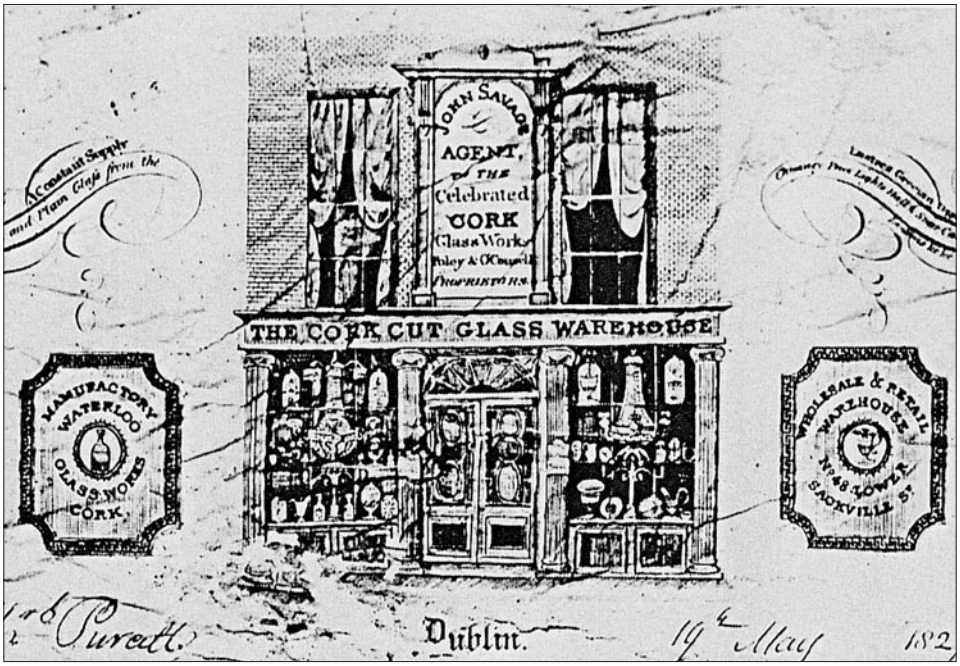
> I suppose thou art now enjoying the delightful sea breezes at some of the fashionable watering places, sailing in a fishing boat or some other new interesting occupation whilst I am nailed to the counter striving to catch all the

> lasses that are not gone to Donnybrook, so much for comparison.[63]

These are the despairing words of Jonathan Wright, writing in 1824 to his brother who was on his holidays from the Dublin shop on Skinner Row where they both worked at this time. His comments regarding his plight prompt consideration of exactly which tactics the Wrights used to catch the attention of the female shoppers to which he refers.[64] A letter written by Jonathan Wright of 1830 shows that he was eager to create as pleasurable a shopping environment as possible: 'The alteration is now nearly complete on the Quay and they have the finest shop in Waterford – a door in the centre and the two windows 10 feet in length.' [65] The emphasis on window space is indicative of the large size of the outlet, but also of an awareness of the advantages of using window area as display space. From the early eighteenth century, London shopkeepers were taking advantage of the improvements in glass manufacture, moving away from the shuttered windows and replacing them with panes of glass through which passers-by could view goods. However, as Cox points out, many retailers were slow to make the change, and as late as the second half of the nineteenth century some retailers' windows were still unglazed.[66] Some shop-owners, it seems, had the facility to display goods in the window but did not use it to full advantage. This was highlighted by John Fannin, Wedgwood's travelling agent in Ireland, in a letter written by him in Leitrim in 1809. In reference to country shopkeepers, he wrote:

> I am certain that if they lay out their shop tastefully our ware will go off fast but they [retailers] have no idea whatever as to disposing to advantage and unless you make it your business to go into their shops and look well about you may pass without knowing they sell such articles. I have endeavoured to point out the advantages arising from the contrary mode and hope they will adopt it. I sold some hedgehogs – medallions, and richly cut gilt jugs to place in a conspicuous part of their shops in order to make a beginning in that way.[67]

In contrast to the country shopkeepers portrayed so unfavourably by Fannin, who was eager to prove his worth as a salesman, Jonathan Wright was clearly aware of the benefits of window display. The same could be said for the retailer known as Savage, agent to the Cork glasshouse (Plate 9).[68] Savage placed an item in front of every window pane, following the example of large-scale shops in London which would have led in the use of ambitious display techniques. Johanna Schopenhauer, a young German tourist travelling in the 1790s, commented on the elegant shop windows she saw in London. In particular, she noted the 'fairy glitter of the crystal shops' and the apothecaries' windows which gleamed 'like an Aladins cave'.[69] Moreover, within the shop itself, retailers would have been eager to display the



glass to its best advantage. In reference to 'new furnishings' at the Edinburgh glasshouse, the manager was keen to point out to the owner of the glasshouse that not only had a new boiler for the engine been purchased, but also some 'fine red material on the desk to display the goods'.[70]

At a time when goods were of a non-standardised nature and of variable quality, the consumer relied on the retailer for guidance.[71] Impressing the consumer was paramount, and the appearance of the retailer's shop acted as the external manifestation of the business.[72] This was a necessity of which Savage was aware, evidenced by the fact that he chose to illustrate his elegant shopfront on his billhead.[73]

Equally aware of the need to establish a strong business identity was James Donovan, a china merchant and glass manufacturer of George's Quay, Dublin. Donovan was known for importing English ceramics, having them painted in his workshop and then impressing or signing 'Donovan's Irish Manufacture' on the underside.[74] The fact that Donovan was successful in his aim is shown in an inventory of 1821 found amongst the Clements Papers. A new purchase is recorded in the 'List of China' as '1 Donovan C & S' [cup and saucer].[75] An account book within a set of papers pertaining to the same family records the payment of 'Carter's bill for glass'.[76] It is tempting to suggest that 'Carter' might refer to the concern of Mary Carter & Son of Grafton Street.[77] Mary Carter was one of a select group of retailers

10 – Moulded base of a glass decanter which has been impressed with the name of Penrose Waterford, 1783-99 (courtesy NMI)

opposite
9 – Billhead used by John Savage of the Cork Cut Glass Warehouse, 48 Lower Sackville Street, Dublin, dated 19 May 1827 (collection Cork Archives Institute; reproduced from M.S.D. Westropp, Irish Glass (London and Dublin (1920) 1978)

and manufacturers who sold pieces of moulded glass bearing their names impressed on the base.[78]

Objects made using the moulding method of manufacture include decanters, jugs, wine coolers, butter coolers, and, to a lesser degree, dishes – essentially any object which could be made by depressing the blown gather of glass into a ribbed mould which had the name impressed into the base of the mould. While under ownership of the Penrose family (1783-99), moulds impressed with Penrose Waterford were used at Waterford, and several examples of Penrose-marked pieces survive (Plate 10).[79] However, there are no known examples marked with the Gatchell name. Often, objects with moulded bases bearing impressed marks were of thinner glass and were cheaper than the very heavy elaborate cut-glass objects made during the 1820s and 1830s. As such objects were generally not moulded, it was not possible to leave an impressed mark on their bases.

A significant element in the overall appearance of the shop was the overall impression given by the plethora of objects which would have been displayed in the shop. Providing an assortment of objects from which the consumer could choose was an abiding priority for the retailer. In order to do this – in other words, to meet the demands of the market – it was necessary for the managers of the Waterford glass ware room to stock goods other than those made in the glassworks.

RANGE AND DIVERSIFICATION

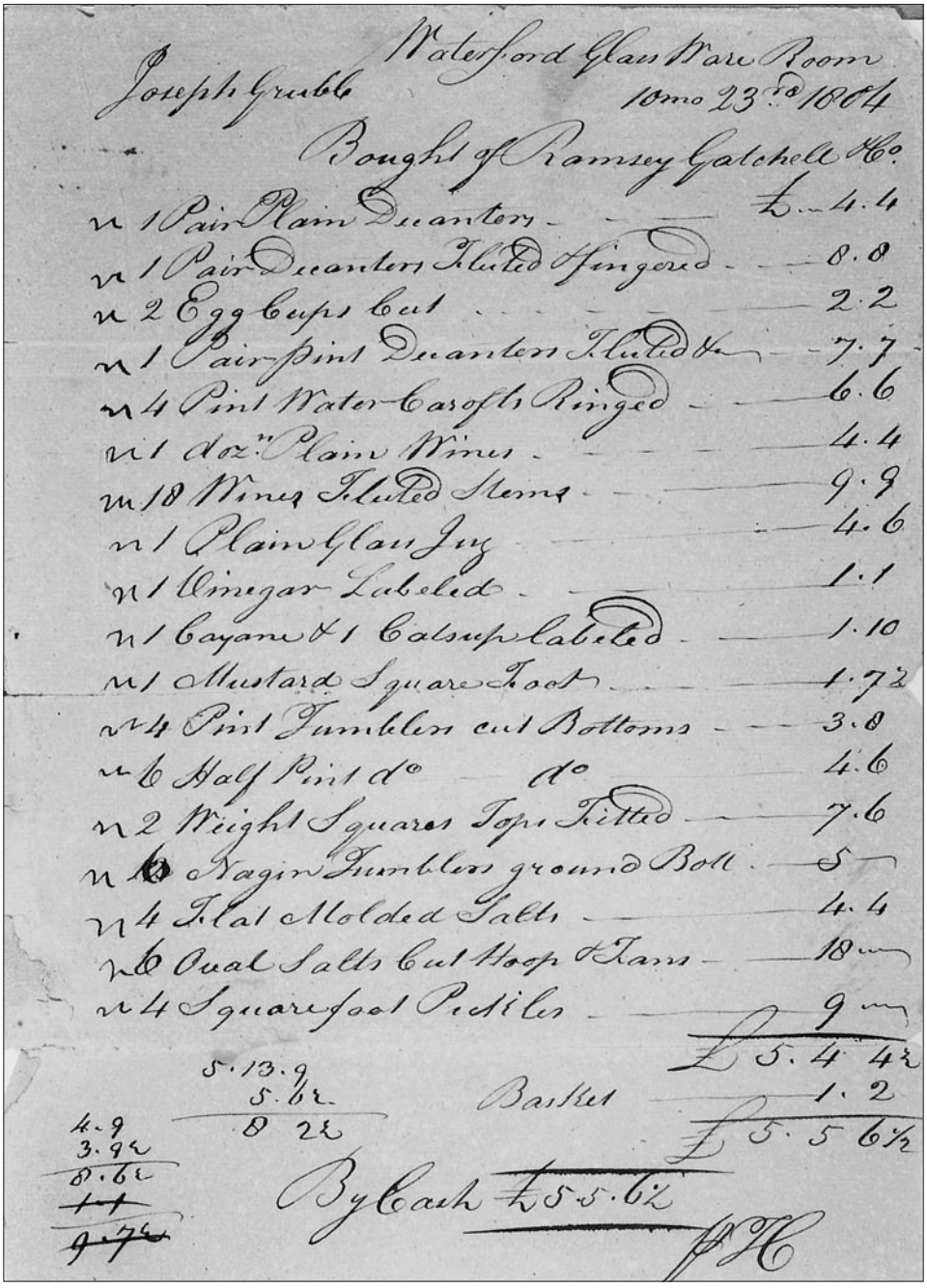
While the Samuel Miller drawings testify to the fact that extremely fine tableware was manufactured at the Waterford glasshouse, it is worth noting that they present only a selection of the goods actually produced (Plates 3, 4). The Gatchell Letters and Waterford glasshouse account ledgers make it apparent that the manufacture of apothecary wares and other plain wares, such as street lamps, comprised a significant portion of their trade, and as these objects do not feature in the Samuel Miller drawings, the importance of these objects to the survival of the glasshouse is commonly forgotten. When submitting evidence to the 1835 report of the commissioners, those running the Waterford glassworks wrote in their request:

> We are manufacturers of flint and phial glass; in the latter, we may say, our trade has been completely superseded by the manufacturers of black bottle metal, they being allowed to make precisely the same quality as common phial, under the denomination of black bottle metal.[80]

It was 'to this cause' that they attributed 'the loss on this branch of our trade, and which we consider a grievance'. Evidently, the sale of phial glass, used mainly by apothecaries, was an important aspect of their trade.

With regard to the more luxury end of their production, when sporadic references from the letters and accounts are seen in tandem with the other surviving sources, one can attempt to give an insight into the range of objects and various patterns which might have faced the consumer on entering the ware room on the quay in Waterford. For example, the only known surviving receipt from the Waterford glassworks' ware room details the fact that in October 1804, Joseph Grubb bought both 'plain' and 'fluted and fingered' decanters, together with both 'plain' and 'fluted stem' wine glasses (Plate 11).[81] The decanters, with what would have been shallow cutting of fluting and fingering, were double the price of the plain decanters, revealing that whether an object was 'cut' or not was a distinction worth making. Similarly, a rare example of an order for some glass in the Gatchell Letters includes both 'best and most fashionable' wines and 'middling wines', together with 'decanters not too high priced'.[82]

While the per capita consumption of wine in Ireland decreased over the course of the eighteenth century, this was compensated for by the increased consumption of locally distilled spirits.[83] Accordingly, the variety of receptacles in demand increased – a need readily met by glass manufacturers. Equally, the fashion for hot beverages was met, and a variety of tea caddies, jugs, caddie spoons and sugar bowls became available (Plate 2). As one individual noted in a letter to the manager of the Midlothian Glasshouse in Edinburgh, 'the highest taste and newest


Waterford Glass Ware Room
Joseph Grubb 10mo 23rd 1804
Bought of Ramsey Gatchell & Co.
nr 1 Pair Plain Decanters — £ 4.4
nr 1 Pair Decanters Fluted & fingered — 8.8
nr 2 Egg Cups Cut — 2.2
nr 1 Pair pint Decanters Fluted &c — 7.7
nr 4 Pint Water Carafs Ringed — 6.6
nr 1 doz. Plain Wines — 4.4
nr 18 Wines Fluted Stems — 9.9
nr 1 Plain Glass Jug — 4.6
nr 1 Vinegar Labeled — 1.1
nr 1 Cayane & 1 Catsup labeled — 1.10
nr 1 Mustard Square Foot — 1.72
nr 4 Pint Tumblers cut Bottoms — 3.8
nr 6 Half Pint do do — 4.6
nr 2 Wight Squares Tops Fitted — 7.6
nr 6 Ragin Tumblers ground Bott — 5
nr 4 Flat Molded Salts — 4.4
nr 6 Oval Salts Cut Hoop & Ears — 18
nr 4 Square foot Pickles — 9
£ 5. 4 4½
5.13.9
5.6½
8 2½
Basket — 1. 2
£ 5. 5 6½
4.9
3.9½
8.6½
By Cash £5 5. 6½

11 – Account for Joseph Grubb in respect of glass items supplied by Ramsey, Gatchell & Co., Waterford Ware Room, 1804 (courtesy NLI)

fashion' was to 'have all table, thea [tea], and other services [utensils] of crystal rather than porcelain'.[84]

Also among the objects purchased by Joseph Grubb were '1 cayenne and 1 catsup [ketchup] labelled' for which he only paid 1s 10d, making these among the cheapest items on his shopping list.[85] They are mentioned as being labelled, which probably implies an engraved label as opposed to a silver label which would hang around the neck. When catsup, or ketchup, was introduced in the late seventeenth century, it was considered a luxury; however, by the early nineteenth century, it was more commonplace. Accordingly, its receptacles were clearly available at a range of prices.

The Samuel Miller drawings should not be seen solely as indicators of product range; the way in which they were actually utilised is also of interest.[86] Comparative analysis of these drawings can assist in determining the context in which they were used. In being quite naively hand-drawn in pencil and then black ink, they differ starkly when compared with certain highly finished patterns seen in the archive of the Richardson's glasshouse in Stourbridge, which were clearly used for presentation purposes.[87] The fact that they do not feature extremely detailed measurements, like those seen in some of the patterns in the archive of the Edinburgh glasshouse, lessens the chances that they acted as a guide in manufacture.[88] Instead, it is plausible that these drawings served as an office copy, and remembering that George Saunders was their travelling salesman, it is possible that patterns of a different nature might have existed, as implied by references to 'George's box of patterns'.

Another factor to be borne in mind when considering the range of goods sold by the glasshouse is that the sources indicate that in order to provide an adequate range of goods from which consumers could choose, the glasshouse managers imported glass from Birmingham which they sold alongside their own products. In a letter written in December 1830 to his father Nehemiah, in Dublin, Jonathan Wright informed him of a decision made by those directly in charge of the ware room: 'they are also getting in some coloured glass and other Birmingham goods, this John has been advised to by GS [George Saunders] and myself which we conceive will tend to increase their trade and keep out auctions'.[89]

The pressure to diversify further is seen when the glasshouse managers consider entering into the earthenware business. Such a move is not so surprising since certain similarities exist between the two industries in terms of production and consumption, together with the marketing strategies of their producers. Most retailers of glass also sold ceramics, and in 1811, when Wedgwood's agent in Ireland considered closing the concern, he looked into alternatives. In a letter to Wedgwood, the Dublin-based agent refers to a possible partnership with Peter Chebsey, a man who

is 'exclusively in the glass line who has Proposed a partnership as Glass and Earthenware facilitate the sale of each other'.[90]

Various indications that the Waterford glassworks also stocked ceramics in their ware room are provided in the Gatchell Letters. A letter written by their salesman George Saunders, while in Quebec on a sales venture in June 1826, mentions that he had sold a service of 'E Ware' [earthenware]. In reference to this, he mentioned that it was a business of which he had a 'tolerable knowledge'.[91] Two years later, in a letter to John Wright, manager of the ware room, Jonathan Wright stated that he was considering an offer made by Isaac Warren of forming a partnership in the earthenware line.[92] Warren, proprietor of a china and earthenware warehouse at Essex Bridge in Dublin, was one of their more important wholesale contacts, and a diary kept by Jonathan Wright's wife records the number of nights on which Warren stayed with them in Waterford.[93] Jonathan Wright was clearly interested in Warren's offer, writing:

> In addition, too the opposition in the glass business must be felt – I have sometimes been sorry something had not been adapted earlier that would put down such an opposition ... it certainly would be well to consider about it so nearly is it connected with both interests.[94]

Whether or not those running the Waterford glassworks actually entered into a partnership in the earthenware line is uncertain. However, on the subject of diversification, Jonathan Wright asserted:

> In the glass retail shop I urge John to do the same, and I think I could if thou were inclined for it, get the name of a few of the Best Manufacturers of Umbrella mounting in Birmingham from Ostler, a nice kind of man in the Drops Business.[95]

The accounts for the glasshouse show they were also trading in wood, worsted, fish, wax, clover seed and pearl ashes, to name just a selection. The *New Commercial Directory for the cities of Waterford and Kilkenny* of 1839 lists the Gatchells as ship owners. This, combined with a wide network of fellow Quakers around Ireland and Britain, not to mention Montreal and Philadelphia, implied they were in a position to fill their ware room with a wide assortment of goods if they so chose.

While ceramics and glass clearly complement each other, it was not unusual for retailers to sell a very diverse range of goods under one roof. At Esau Clarke's Dublin establishment, Wedgwood's products were sold alongside trumpets and French horns, while Luffingham's, which also sold Wedgwood, was known to have sold groceries as well.[96] Yet there is evidence to show that there were retailers who specialised in the sale of ceramics and glass – for example, James Donovan china

merchant and glass manufacturer, mentioned earlier.[97] Analysis of the Waterford account books reveals that Donovan, despite having his own glasshouse making fine table goods, was buying glass from the Waterford glassworks. However, we also know that glass made in Waterford was sold alongside ginghams and worsted cloth in Nehemiah Wright's shop in Skinner Row.

Certainly, the model to which such retailers probably aspired was that of a large specialist shop such as Blade's of Ludgate Hill in London. Against the background provided by such specialised London retailers, who had a very substantial consumer base, the manner in which ceramics and glass were sold in Ireland may appear, in part, arbitrary and unfocused. Cox asserts that the same range of shops was to be found in the English provinces as in London. However, she points out that those shops in the provinces may have been, out of necessity, less specialised, more serviceable, and designed to cater for a more socially mixed clientele.[98] As an important city within the Empire, Dublin was far from provincial. However, the majority of retailers who sold glass, also sold a wide variety of other goods, ranging from earthenware and Japanned wares to plated wares, from expensive display pieces to the very cheap and utilitarian.

If the Waterford glassworks sold not only glass, but also earthenware and umbrellas, they were responding to the challenges of the day and doing what every retailer aimed to do, which was to supply the demands of the market.

CONCLUSION: A DECLINING MARKET

Writing from a temporary sales outlet in Cork which they had hired in the hope of selling some glass, Ambrose Barcroft, a partner in the Waterford glassworks at the time, explained that their lease was about to terminate and he felt it would be pointless to extend it.[99] Referring to the 'lustres and candlesticks', he said: 'I fear neither will go, the former I offered at 40 guineas and the latter at 2/3d [two thirds] selling price or rather under but could not obtain it.'

Upon observing that Barcroft was facing difficulties, the local Cork retailers were quick to take advantage with some managing to secure large discounts. Referring to the Savage family, who were established ceramic and glass retailers in Cork, Barcroft wrote despairingly that the 'Savages were so savage at it that on their taking an £100 worth I promised to find them ... 60 [more] on same terms as they bought which is a sacrifice of about £2 10.' Barcroft also mentions that they have had an order for some cheaper goods, which he refers to as 'tale goods', meaning goods made out of a poorer quality glass.[100] With the 'plain goods selling as fast as they are made', it would appear that the sale of cheaper goods, such as those made

using tale glass, was what assisted in sustaining business at the glasshouse.[101]

The practice of providing long periods of credit saw debts accrued in America, which reached into the thousands. In a letter to his brother dated 1 July 1819, Jonathan Gatchell wrote that they had 'about £1100 unsettled in Philadelphia, £760 in New York, £300 in Halifax, nearly £600 in Newfoundland and £150 in Quebec, beside the dead stock on hands at home'. The accounts show that when Jonathan Gatchell died in 1823, there was £2,400 owed to him in debts.[102] Fears were heightened during the 1820s and 1830s as the famine of 1820-22 and concomitant economic decline had resulted in a crisis of confidence in the financial sector. In May of 1820 two banks closed in Cork, and a month later, the death, or possible suicide, of the head of Newport's bank in Waterford left many with useless money instead of financial security.[103] An advertisement in *The Constitution or Cork Advertiser* on 4 March 1826 announced that an auction would take place at the 'office lately occupied by Mrs Graham nearly opposite the Chamber of Commerce, Patrick Street' of 'her splendid assemblage of cut glass which is brought to auction as a consequence of the stoppage of the banks'.[104]

Accounts prepared in August 1835, when George Gatchell came of age and the partnership dissolved, reveal that in 1830 the glassworks had outstanding debts of a colossal £5646 3s 2d, and a sum of £4325 6s 9d which lay in glass and materials.[105] With a weekly accumulation of cut goods, it was necessary to find out exactly which objects were selling well, where they sold, and to whom. In October of 1830, Jonathan wrote to Nathan Wright, their agent in Dublin, asking him to 'send an acct of what salts thou hast sent out, our sale for cut articles is bad & the stock accumulating'.[106] Shortly after this, Jonathan Wright wrote to his father in Dublin asking if there was any money owing to them in Dublin. If there is, he despaired, 'send it here, we have almost nothing towards paying the men next 6th day so let it be before that time'.[107]

As the 1830s progressed, auctions are mentioned with more frequency in the Gatchell Letters. In April 1835 an auction was mentioned in a letter, again from Jonathan Wright to his father. He says the auction will begin with the 'cut goods and rubbish'.[108] Their estimation of the home market in Waterford is seen when they plan an auction of the 'less valuable cut goods, so long as 20 per cent below stock prices are realised'. The more valuable pieces were to be sold in an auction 'exclusively for the trade'. Evidence that members of the trade were also struggling can be observed in an advertisement placed in August 1835 by William Jackson, a client of the Waterford glassworks mentioned earlier. He explained that 'the stock of this establishment, which is one of the most elegant, select and extensive in Dublin, is now selling off at a reduction of from 10 to 30 per cent under former prices'.[109]

Given that all of the fuel used, and a substantial portion of the raw materials

needed had to be imported, production costs were high, leaving small profit margins on the cheaper goods. While in part answered by the closure of many glasshouses during this period, the question still remains to be asked: in the face of such difficulties, why did they persist? In his letter to the Commissioners of the Inquiry into Excise, the Dublin glass manufacturer Charles Mulvany pre-empted this enquiry:

> It may be asked of me, why continue in a trade of which by your own showing, you make nothing? The answer is, that from the peculiar locality of my establishment we are much engaged in manufacturing a description of goods for which we can charge a remunerating price, such as the matching of patterns, hurried orders, lamp shades and fittings, apparatus, &c. &c. We are by this enabled to save ourselves; and certainly, we would not remain satisfied with this, but relinquish a trade affording us not only no reasonable profit, but no surplus to meet contingencies, had we not already a large capital invested in buildings, a connexion in trade long formed, and a great number of people dependent on us for support, many who have grown old in our service; and but for the conviction and hope that such a monstrous oppression could not much longer exist.[110]

The London glassmaker Apsley Pellat echoed Mulvany's words in his evidence, stating that 'matching' was a considerable branch of his trade, a factor he attributed to his urban location.[111] Glass by its very nature was easily broken, and a consumer wishing to replace a broken component of a set could have brought a glass object to a retailer or glasshouse to be 'matched'. In fact, the Cork retailer Marsden Haddock, who was trading during the late eighteenth century, boasted on his trade circular that glasses could be 'matched at sight' at his shop.[112] An urban context such as Dublin or London presented a far more substantial market for such a service than could have been accessed on those terms in Waterford. However, perhaps the activity of making copies of patterns explains the nature of the contents of the 'box of patterns' sent by the retailer James Kerr to the Waterford glassworks on 9 September 1832.[113]

In the hands of George Gatchell from 1835 onwards, the Waterford glasshouse continued production until 1851.[114] After submitting an impressive cut-glass epergne to the Great Exhibition of 1851 in one last attempt to illustrate their ability to make fine luxury glass, George Gatchell finally admitted that the glasshouse was a losing concern and it was time to close:

> I may mention (in private) that I have quite concluded on giving up the business as soon as I possibly can, as I find it quite useless to strive against adverse circumstances any longer. I have tried several expedients to place the business on a better footing, by getting additional capital, but in vain. There

> is a very painful ordeal to pass through and a cheerless future but I have done my best to maintain my ground and I feel less disheartened at the prospect, than I did some time ago.[115]

In his 1916 guide for collectors of English and Irish glass, Yoxall spoke of the charm of old cut glass: 'in cabinets it shines, gleams, glows, and sparkles in a reticent, well-bred way'.[116] The 'common phial', 'tale wines' and 'plain tumblers' which were so important to the story of Waterford glass clearly did not survive to earn a place in Yoxall's cabinet.[117] However, the rare and fortuitous survival of a sample of the Waterford glass business records allows us to look beyond the gleaming surface of the object to reveal a tale of determination in the face of economic upheaval. In providing an insight into the reality of trying to survive as a manufacturer on the eve of the Great Famine, these records encourage us to look at the broader social and economic context to understand the nature of the Irish glass industry. Just like any small manufacturer during the early nineteenth century, those running the Waterford glassworks took every step in the struggle to maintain its consumer base. Amidst accounts of consumer manipulation and tactical manoeuvring by successful figureheads such as Josiah Wedgwood and Mathew Boulton, a valuable case study is provided by the experiences of those running this small, yet legendary manufacturing concern.

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ENDNOTES

The following abbreviations are used:

NLI	National Library of Ireland
NMI	National Museum of Ireland
PRDS	*Proceedings of the Royal Dublin Society*
Thirteenth Report of Excise Inquiry	*The Thirteenth Report of the Commissioners appointed by His Majesty to inquire into the establishment of the Department of Excise, and into the Management and Collection of the Excise Revenue in all its branches, throughout the United Kingdom*

1 Examples of interpretations written in this vein include: I. Grehan, 'Waterford, an Irish Art', *Irish Arts Review*, i, 2 (Dublin 1984) 20-3, and Phelps Warren, *Irish Glass, The Age of Exuberance* (London (1970) 1981). It should be noted that the Waterford Crystal factory, now owned by Waterford Wedgwood, was set up in 1947 and has no direct connections with the earlier glassworks, which operated between 1783 and 1851.

2 *PRDS*, 1784-85: the Society's aim to encourage glass manufacture, in accordance with the parliament's wishes, was discussed at a meeting on 11 August 1785. The sums awarded annually to claimants were proportionate to their annual production to a maximum of 10%. *PRDS*, 1787-88: it was ordered at a meeting on 15 March 1787 that William Penrose of Waterford receive a premium of £160, having proved that flint glass to the value of £1600 had been manufactured at the Waterford glasshouse. Proof of production generally came in the form of an affidavit from both a proprietor and an office clerk from each glasshouse concerned.

3 The relevant statute is 21 and 22 George III, c 17, 1781-2. This act declared that additional duty on coal was not to be imposed when used for the manufacture of glass, sugar or salt.

4 M.S.D. Westropp, *Irish Glass*, M. Boydell (ed.) (London and Dublin (1920) 1978) 210. Mary Boydell notes that George Penrose (1722-1796) was an uncle of William Penrose (1746-1799), not a brother as previously thought.

5 These figures do not take account of glasshouses principally manufacturing bottles.

6 Westropp, *Irish Glass*, 1978, 204

7 H. Wakefield, *Nineteenth Century Glass* (London 1982, 2nd ed.) 20. Wakefield's views are based upon analysis of the statistics showing the amount of duty paid by glassmakers in England, Scotland and Ireland in 1833. The figures for duty paid on glass of all descriptions are as follows: England: £680,084 1s $8^{3}/_{4}$ d; Scotland: £45,491 14s 6d and Ireland: £22,399 19s $0^{1}/_{2}$d. These statistics are tabulated in the *Appendix to Thirteenth Report of Commissioners of Excise Inquiry*, xxxi, 1835.

8 Both Mary Boydell and Charles Hajdamach have echoed Wakefield's views. M. Boydell, *Irish Glass*, Heritage Series no. 5 (Dublin 1976); C.R. Hajdamach, *British Glass 1800-1914* (London 1991) 127.

9 These sources are in the NMI, Art & Industry Archive. Westropp was first employed in 1899 as a curator by the NMI, later being appointed Keeper of the Art & Industry Division in 1930, in which capacity he worked until his retirement in 1936.

10 NMI, Art & Industry Archive, Gatchell Letters, vols 1 and 2, registration no. 1956.154.

11 NMI, Art & Industry Archive, registration no. 1927.102. Samuel Miller is first mentioned in

the Gatchell Letters in December 1828 in which he is described as 'foreman of the glasscutters', Gatchell Letters, document 25, 9 December 1828. He is mentioned again in 1831 and also in 1832, Gatchell Letters, document 49, 11 August 1831, and document 55, 10 June 1832 respectively.

[12] NLI, Westropp Papers, MS 24,936. M.S.D. Westropp was alerted to the existence of the 'Miller Drawings' in a memorandum to him from the Cork historian and medal dealer Robert Day, dated 28 November 1910. The drawings were bequeathed to the NMI by Ms Anne Miller, daughter of Samuel Miller, in 1927.

[13] Hajdamach, *British Glass 1800-1914*, 39.

[14] The earliest reference to a steam engine in the surviving documentary sources for the Waterford glasshouse dates to 25 July 1827, NMI, Art & Industry Archive, account ledger, registration no. 1956.138.

[15] Westropp, *Irish Glass*, 82; *PRDS*, 1834-35, appendix xii, 'Adjudication of Premiums at the Second annual exhibition of Irish Manufactures, Productions, and inventions, at the Royal Dublin Society's house, May 1835'. Gatchell, Walpole & Company, Waterford, were awarded a large silver medal for their submission of 'A Rich Cut Flower Vase & Dish'.

[16] NMI, Art & Industry Archive, registration nos 1956.132-52. In addition, various items of ephemera associated with the glasshouse also survive – for example, a billhead which was used between 1830 and 1835 (Art & Industry Archive, box 114, reference 749). These account ledgers, together with the Gatchell Letters and other records pertaining to the Waterford glassworks, were acquired by M.S.D. Westropp from Samuel Hudson Wright in December 1917 for the sum of £8. The NMI acquired these records at the sale of Westropp's estate at a Sotheby's sale on 25 June 1956.

[17] D. Dickson, 'Death of a capital? Dublin beyond the Union' in P. Clark and R. Gillespie (eds), *Two Capitals: London and Dublin, 1500-1840* (Oxford 2002) 124.

[18] *ibid*.

[19] C. Ó Gráda, *Ireland, A New Economic History, 1780-1939* (Oxford 1995) 46.

[20] A. FitzGerald and C. O'Brien 'The production of silver in late-Georgian Dublin', *Irish Architectural and Decorative Studies: Journal of the Irish Georgian Society*, iv (2001) 28.

[21] A. Alexander 'A firm of Dublin Cabinet-makers Mack, Williams & Gibton', *Irish Arts Review Yearbook*, 11 (Dublin 1995) 142.

[22] Ó Gráda, *Ireland, A New Economic History*, 159.

[23] *ibid*., 160.

[24] *ibid*., 316.

[25] C. Ross, 'The Excise Tax and Cut glass in England and Ireland, 1800-1830', *Journal of Glass Studies*, xxiv (1982) 57-64.

[26] *ibid*., 58.

[27] *Appendix to Twelfth Report of Commissioners of Inquiry into the Revenue arising in Ireland, Scotland &c*., xiv, 1825, appendix 120, 753-76: 755. Letter from James Roche, secretary to Flint Glass Manufacturers, Ireland, 'praying an uniformity in the Law and Practice for collecting the Duty on Glass in Ireland to that in operation in England'.

[28] In 1825, the duty amounted to £12 10s per 1,000 lbs of glass metal for flint or phial glass. The relevant statute is 6 George IV c 117, 5 July 1825.

[29] *Appendix to Thirteenth Report of Commissioners of Excise Inquiry*, xxxi, 1835.

[30] Grehan, 'Waterford, an Irish Art', 20.

[31] *Appendix to Thirteenth Report of Commissioners of Excise Inquiry*, xxxi, 1835, appendix 45, 152-6.

[32] *ibid*., appendix 4, 70.

[33] T. Barnard, 'Integration or Separation? Hospitality and Display in Protestant Ireland, 1660-1800', in L. Brockliss and D. Eastwood, *A Union of multiple identities: the British Isles c.1750-c.1850* (Manchester 1997) 128; S. Foster, 'Going Shopping in 18th-Century Dublin' *Things*, iv, 1996, 50.

[34] NLI, Fingall Papers, MS 8029(1). The Higginbothams were important ceramic and glass retailers who ran retailing establishments in Dublin from at least 1784 until 1864. While initially situated at 20 East Arran Street, trade directories list various addresses over this period for T. & W.H. Higginbotham and Edward Higginbotham. They include 1 and 106 Pill Lane, 102 Grafton Street, and also 11 and 12 Wellington Quay. They are known to have sold imported English-made ceramics which were decorated in Ireland and then signed on the underside with the name of Higginbotham.

[35] Another bill for goods bought at a shop owned by the Higginbothams survives and is now in the D. Westropp collection. It dates to 27 June 1817, and the name of the shop is described as T. & W.H. Higginbotham's extensive China and Earthenware Room, Waterford Glass Stores and Cut Glass Manufactory. The Waterford glass account ledgers show that Thomas Higginbotham purchased glass on a wholesale basis from the Waterford glassworks, and their purchases in 1817 (totalling £307 8s 4d) were approximately 50% greater than they had been the previous year (totalling £217 13s 11d). NMI, registration no. 1956.133, account of T. and W. H. Higginbotham.

[36] These are the words used by Thomas Burnett & Co. in charge of the Cork Glass Company between 1783 and 1787, *Hibernian Chronicle*, 6 May 1784, cited in Westropp, *Irish Glass*, 115.

[37] E. Wakefield, *An Account of Ireland Statistical and Political* (London 1812) 755.

[38] *Wilson's Dublin Directory* lists a John Kennedy, agent to the Waterford glasshouse between the years 1789 and 1807, at 50 Stephen Street, and between 1807 and 1811 at 42 Stephen Street, Dublin.

[39] *Saunders' Newsletter and Daily Advertiser*, 4 June 1808.

[40] Throughout the early 1820s, William Jackson regularly bought considerable quantities of glass from the Waterford glassworks. During the first six months of 1823, William Jackson ordered twelve hogsheads and two tierces of glass, totalling £249 18s 8d. During the same six months, William Carter of 84 Grafton Street ordered only three hogsheads and one tierce of glass, totalling £54 9s 7d. NMI, registration no. 1956.138, account ledger. William Carter was the son of Mary Carter who together traded as Mary Carter & Son, glass dealers of 80 Grafton Street between 1779 and 1806. Later, from 1810 to 1830, William Carter alone operated as a 'China and Delf Seller' at 84 Grafton Street.

[41] NLI, Rochfort Papers, MS 8682(4). The bill is for various ceramic and glass items, including '24 Cut Hobnob glasses' costing 22s, and '24 Cut wines' costing 16s, purchased by Colonel Rochfort from William Jackson during May and December 1831.

[42] J. Hill, *From Patriots to Unionists* (Oxford 1997) 290.

[43] For an account of the Buy Irish campaigns of the eighteenth century, see S. Foster 'Buying Irish Consumer Nationalism in Eighteenth Century Dublin', *History Today*, 47, June 1997.

[44] Gatchell Letters, document 62: letter from Jonathan Wright to Nehemiah Wright, 9 September 1832.

[45] *ibid*., document 42, same to same, 20 January 1831.

[46] The Waterford glass ware room is mentioned in a newspaper advertisement on 12 December 1799, *Ramsey's Waterford Chronicle*, 12 December 1799, cited in Westropp, *Irish Glass*, 73.

[47] J. Mannion, 'The Waterford Merchants and the Irish Newfoundland Provisions trade, 1770-1820', in L.M. Cullen and P. Butel (eds), *Negoce et Industrie en France et en Irlande aux XVIII et XIXe Siecles* (Paris 1978) 27-43.

[48] D. Dowling, *Waterford Streets Past and Present* (Waterford 1998) 162.

[49] *Harvey's Waterford Directory and Almanac for the year 1839* (Waterford 1839).

[50] *Waterford Chronicle*, 29 August 1835.

[51] D. Herbert, *Retrospections of Dorothea Herbert 1770-1806* (Dublin 1988), cited in S. Foster, 'Going Shopping', 43-4.

[52] D. Cowman, 'Trade and Society in Waterford 1800-1840', in W. Nolan and T.P. Power (eds), *Waterford, History and Society* (Dublin 1992) 446.

[53] R. Graham, *A Scottish Whig in Ireland, 1835-1838 – The Irish Journals of Robert Graham of Redgorton* (Dublin 1999) 85.

[54] *ibid*., 91.

[55] The number of employees fluctuated throughout the period during which the glassworks was in operation. This is attested by the various records consulted. However, the nature of the source of each statistic must be borne in mind when being considered. An advertisement placed by the glassworks in April 1820, announcing an auction of glass, describes the glassworks as an establishment which has 'for the past thirty-six years given daily employment to nearly two hundred persons', *Waterford Mirror*, 5 April 1820, cited in Westropp, *Irish Glass*, 75. *Harvey's Waterford Directory and Almanac* of 1839 refers to 70 people being employed by the glassworks. The 1841 Census of Ireland lists that 38 people were employed in glass manufacture in the city of Waterford, and there was only one glasshouse in Waterford. For more information on the census see appendix 4 in Cowman, 'Trade and Society', 457.

[56] *Saunders' Newsletter and Daily Advertiser*, 6 January 1808.

[57] Gatchell Letters, document 35: letter from Jonathan Wright in Waterford to Nathan Wright, summer 1830.

[58] *ibid*., document 41: letter from Jonathan Wright to his father Nehemiah Wright, 23 December 1830.

[59] *ibid*., document 29: letter from John Wright to Nathan Wright, 14 December 1829: 'George is a nice lad ... but I regret my aunt is not better qualified to train him up ... I can't leave really till George is trained.'

[60] Museum of Edinburgh, Ford Ranken Archive of Family Correspondence relating to the Holyrood Glasshouse, Edinburgh; collection of Dr and Mrs Cruickshank. Letter from William Johnstone, 17 Ripy Street, Liverpool, to John Ford Junior, St John Street, Edinburgh, 26 February 1856. Although slightly later than the period concerned, this letter is still worth quoting. I am grateful to Beverly Casebow for allowing me to read transcriptions of these letters.

[61] Gatchell Letters, document 104: letter from Jonathan Wright to Nathan Wright, 18 June 1835.

[62] Upon coming of age in 1835, George Gatchell gained complete ownership of the glassworks. The partnership on that date consisted of Nehemiah Wright, Elizabeth Knott (late Walpole) and Nathan Gatchell. To recompense for the dissolution of the partnership, George Gatchell offered the partners a five-year lease on the retail ware room. In the agreement detailing this proposal, he specified that he would 'give up to thee the Retail Glass Business on the Quay,

with the shop and back parlour, for five years, upon the following terms, thou paying all taxes and a reasonable rent'. Gatchell Letters, document 95: letter from George Gatchell to John Wright, 7 April 1835.

[63] *ibid*., document 19: letter from Jonathan Wright in Skinner Row, Dublin, to Nathan Wright, 23 August 1824.

[64] This was written in August when the Donnybrook Fair was held every year.

[65] Gatchell Letters, document 41: letter from Jonathan Wright to Nehemiah Wright, 23 December 1830. Westropp, *Irish Glass*, 93.

[66] N. Cox, *The Complete Tradesman: A Study of Retailing 1550-1820* (England 2000) 98.

[67] Letter from John Fannin, travelling agent for Wedgwood, written while in Manorhamilton, county Leitrim on 6 October 1809, to Joseph Randall, manager of Dublin's Wedgwood shop. M. Reynolds, 'Wedgwood's Man', *Heart of Breifne* (Cavan 1982) 12.

[68] Cork Archives Institute, Ryan Purcell Papers, U139. This bill was for '3 doz + 6 Lemonade Cans Fluted' costing £2 3s 9d, bought by a member of the Purcell family. John Savage, agent to the Waterloo Glasshouse, Cork, is listed in the Dublin street directories at 48 Lower Sackville Street in 1824. From 1826 to 1828 he is listed at the same address as an agent to Foley and O'Connell of the Cork Glass Company, and in 1829 John Savage is listed at the same address as proprietor of a 'China and Glass Warerooms', indicating no direct association with any one glasshouse.

[69] J. Schopenhauer, *A Lady's Travels: journeys in England and Scotland from the diaries of Johanna Schopenhauer*, translated and edited by R. Michaelis-Jena and W. Mearson (London 1988) 138-9, cited in Cox, *Complete Tradesman*, 97.

[70] Museum of Edinburgh, Ford Ranken Archive, letter from George Roy to John Ford, manager of the Midlothian Glasshouse (later trading under the name Holyrood Glasshouse), 20 February 1820.

[71] C. Walshe, 'Shop Design and the Display of Goods in Eighteenth Century London', *Journal of Design History*, viii, 3, (Oxford 1995) 158.

[72] *ibid*.

[73] In an advertisement placed by Savage notifying the public of an auction to be held in Waterford on 13 February 1823 of 'Richly Cut Glass from the Cork Glass Works', he emphasises that the glass being auctioned was 'exactly similar to the elegant [selection] in the proprietor's newly formed splendid establishment at No. 48 Lower Sackville Street, Dublin', *Ramsey's Waterford Chronicle*, 13 February 1823.

[74] In this context, the term 'manufacturer' should be taken to mean organiser or co-ordinator as opposed to producer.

[75] Trinity College Dublin, Clements Papers, MS 7277, item 16. I would like to thank Alison FitzGerald for pointing me towards this collection of papers.

[76] NLI, Clements Papers, MS 9625, 31 December 1805.

[77] Mary Carter's business was carried on by William Carter; see note 40 above.

[78] It should be noted that it is unlikely that all pieces of moulded glass sold by these retailers would have borne their names impressed on the base. However, retailers who are known to have sold pieces marked with the names of their concerns include Francis Collins, Dublin; James Armstrong, Ormond Quay; J.D. Ayckbowm, Dublin, and Mary Carter, 80 Grafton Street. While Ayckbowm did operate as a glass manufacturer for a short period between 1799 and 1802, and James Armstrong was a glass-cutter by trade, the retailers mentioned would

have had to commission particular glasshouses to make the glass using specific moulds, and it is not clear which glasshouses supplied which retailers. Indeed, as Westropp points out in relation to James Armstrong, the glass itself may have been of English origin. Westropp, *Irish Glass*, 199.

[79] Other glasshouses, which also maintained this practice, include the Waterloo glasshouse, county Cork; the Cork Glass Company; Charles Mulvany and Company, Dublin; and B. Edwards, Belfast. In a similar manner to the retailers referred to in note 78 above, not every piece of moulded glass produced by the glasshouse would have borne an impressed name on the base.

[80] The managers of the Waterford glassworks explained in their statement that as flint and phial manufacturers they paid 56 shillings per hundredweight of glass. However, the black bottle makers only paid 5 shillings per hundred weight of glass, enabling the latter to dispose of them at an even lower price than the duty alone came to on the former. *Appendix to Thirteenth Report of Commissioners of Excise Inquiry*, xxxi, 1835, appendix 6, 73.

[81] NLI, MS 17390. Account for Joseph Grubb in respect of glass items bought from the Waterford Glass Ware Room, 23 October 1804.

[82] Gatchell Letters, document 12: letter from Martha Barnes in Edenderry to her uncle Jonathan Gatchell in Waterford, 8 December 1799.

[83] Barnard, 'Integration or Separation?', 137.

[84] Museum of Edinburgh, Ford Ranken Archive, cited in G. McFarlan, 'Early nineteenth-century patterns from the Ford Ranken Archive', *Journal of the Glass Association*, 4 (1992) 8, letter from J.H. Koch to John Ford, manager of the Midlothian Glasshouse (later trading under the name Holyrood Glasshouse), 26 April 1823.

[85] NLI, MS 17390.

[86] Also of vital importance is the issue of the role of patterns in the transmission of design. This subject is considered in the author's MA thesis. A. Moran, *Manufacturing Mythology? Waterford glass in the early nineteenth century*, unpublished V&A/RCA MA thesis, 2002.

[87] Collection of the Broadfield House Glass Museum, England, placed on loan to Dudley Library Services, Webb Richardson pattern books. The Webb Richardson pattern books are those which were used at the glasshouse owned by the partnership of William and Benjamin Richardson and Thomas Webb, situated in Wordsley in Stourbridge, England. The pattern books studied date from 1829, when the partnership was formed, into the late 1830s.

[88] Museum of Edinburgh, Ford Ranken Archive. The pattern books studied are those which were used at the Edinburgh glasshouse, which was variously named the Caledonian (*c.*1798-1819), the Midlothian (1819-35), the Holyrood (1835-98), and the Royal Holyrood Flint Glassworks (1898-1904). The pattern book 'FR9', which bears the date of 27 August 1826 on the inside cover, includes patterns which provide very precise and detailed dimensions for each part of the piece of glass. Clearly such patterns were intended to be used as guides during the production process. For further information on the Ford Ranken Archive, see McFarlan, 'Early nineteenth-century patterns'.

[89] Gatchell Letters, document 41: letter from Jonathan Wright to Nehemiah Wright, 23 December 1830. Westropp, *Irish Glass*, 93.

[90] University of Keele, Wedgwood Manuscripts, 2407-3: letter from J. Randall, Capel Street, Dublin, to Josiah Wedgwood, 7 June 1811. I am grateful to Mairead Dunlevy for this reference.

[91] Gatchell Letters, document 22: letter from George Saunders in Quebec to John Wright, 20 June 1826.

[92] The Gatchell Letters testify to a close business relationship shared between the Waterford glassworks and Isaac Warren, and it is clear that when George Gatchell came of age and took over the running of the glassworks, Warren offered the Wrights financial backing if they wished to buy the glassworks from George Gatchell. The Dublin street directories list an Isaac Warren as the proprietor of a glass warehouse at 31 Essex Street from 1824 to 1837. Another glass warehouse is listed, at 21 Essex Street, under the name of Warren & Company, from 1829 to 1841. From 1838 until 1856, Isaac Warren is listed as a china merchant at 7 Adelaide Road and 21 Essex Street. Additional members of the Warren family also feature in the street directories, each working in the business of ceramics and glass retailing.

[93] Dublin, Religious Society of Friends Archive, portfolio 35, item vii: the diary of Jonathan Wright's wife, covering the years between 1832 and 1835.

[94] Religious Society of Friends Archive, portfolio 34, item vi, April 1828.

[95] Gatchell Letters, document 54: letter from Jonathan Wright to Nathan, 6 April 1832.

[96] Esau Clarke was described as a French horn and trumpet maker in *PRDS*, 27 June 1771, 190, but later featured in a 1787 Dublin street directory as a delft merchant. M. Reynolds, 'Wedgwood in Dublin, 1772-1777', *Irish Arts Review*, i, 2 (Dublin 1984). In a personal account book of the Rt Hon Richard Jackson and his wife Anne Jackson, 1767-1778, the following entry is noted: 'Paid Luffingham for Cheshire Cheese, Dozen of Beer and a China Mug', 24 March 1768; TCD, MS 9218, 7, cited in Foster, 'Going Shopping', 50.

[97] M. Reynolds, 'James Donovan "The Emperor of China"', *Irish Arts Review*, i, 3 (Dublin 1985) 28-36. Donovan had a brass establishment for making lamps and other articles; however, as brass was used in glass lamps, it was consequently a logical extension of production.

[98] Cox, *Complete Tradesman*, 114.

[99] Gatchell Letters, document 14: letter from A. Barcroft in Cork to Jonathan Gatchell in Waterford, 24 April 1805. Between 1799 and 1811, the glass works was owned by three partners – Jonathan Gatchell, Ambrose Barcroft and John Ramsey.

[100] A notebook dated 1828, containing recipes used at the Waterford glassworks, includes 'Instructions to fill a pot with Tale'. The book instructs the user to 'Fill the tray with skimmings or chert metal or washed tale and put in about eight shovels full of batch. Put in a pinch of manganese at the bottom and likewise ... about 8 or 10 pinches managanese and so to fill it up.' The recipes are in the D. Westropp collection, and I would like to thank Mary Boydell for making her copy of this notebook accessible to me.

[101] Gatchell Letters, document 48: letter from Jonathan Wright to Nathan Wright, 28 July 1831.

[102] *ibid*., document 20b: 'Debts due to the estate of Jonathan Gatchell', 19 November 1825.

[103] NLI, MS 3288. *Enquiry into the Poor in Waterford* (1834) 96-7, the 'Extract from the Annual Statement furnished by the trustees of the Waterford Savings Bank', 20 November 1833, reveals that in 1820 the 'amount of deposits remaining' reduced from £10,662 6s 10d to £6577 18s 5d. This reduction was explained by the recorder: 'In the month of June 1820, Newports Bank failed and the distress and panic consequent thereon explains the cause of the reduction in this year'. These figures also reveal that 1,218 of the 2,714 depositors had a figure not exceeding £20 in the bank, and only 16 of the 2,714 depositors had between £150 and £200 lodged. Enquiry carried out by Patrick Francis Johnston and Edmond Moylan.

[104] I would like to thank Mairead Dunlevy for this reference.

[105] Excise duty had to be paid regardless of whether the glass sold or not. Therefore, duty had to be paid on the glass which sat in store rooms, later to be sold at a great loss. With this in mind,

one should be cautious when interpreting statistics pertaining to duty paid on glass retained for home use. *Returns relating to Glass Retained for Home Use, and Quantities Exported, Duty Charged, and Drawback paid on each description, in the United Kingdom, from 1814 to 1841* (England 1841) 160.

[106] Gatchell Letters, document 36: letter from Jonathan Wright to Nathan, 15 October 1830.

[107] *ibid*., document 33: letter from Jonathan Wright in Waterford to Nehemiah in Dublin, 27 June 1830.

[108] *ibid*., document 99: same to same, 23 April 1835.

[109] *Saunders' Newsletter and Daily Advertiser*, 11 August 1835.

[110] *Appendix to Thirteenth Report of Commissioners of Excise Inquiry*, xxxi, 1835, appendix no. 44, vol. 31, 148.

[111] *ibid*., appendix no. 31, vol. 31, 122.

[112] The full verse which features on Marsden Haddock's trade circular is quoted in R. Day, 'Eighteenth Century Trade Circulars and Invoices of Cork Traders', *Journal of the Cork Historical and Archaeological Society*, vii, 1901, 170.

[113] Gatchell Letters, document 62: letter from John Wright to Nehemiah Wright, 9 September 1832.

[114] Between 1836 and 1848, a partnership existed between George Gatchell and George Saunders, who had, up to that time, been an employee of the glasshouse.

[115] Waterford Crystal Museum, Letter from George Gatchell to 'Jonathan', 21 April 1851.

[116] J.H. Yoxall, *Collecting Old Glass English and Irish* (New York 1916) 1.

[117] Gatchell Letters, document 97: letter from Jonathan Wright to Nathan Wright, 7 May 1835. 'Tale wines' are included in a list of objects, with associated prices, intended to be passed to Isaac Warren. Plain tumblers are mentioned in a letter from Jonathan Wright to Nathan Wright: 'I should like to know what articles of glass you might be wanting most – perhaps a few wines rumours good plain tumblers carofts', Gatchell Letters, document 108: letter, 10 August 1835.

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