

2016

Turlington's Balsam of Life

Olive Jones

Allen Vegotsky

Follow this and additional works at: <https://orb.binghamton.edu/neha>



Part of the [Archaeological Anthropology Commons](#)

Recommended Citation

Jones, Olive and Vegotsky, Allen (2016) "Turlington's Balsam of Life," *Northeast Historical Archaeology*: Vol. 45 45, Article 1.
Available at: <https://orb.binghamton.edu/neha/vol45/iss1/1>

This Article is brought to you for free and open access by The Open Repository @ Binghamton (The ORB). It has been accepted for inclusion in Northeast Historical Archaeology by an authorized editor of The Open Repository @ Binghamton (The ORB). For more information, please contact ORB@binghamton.edu.

Turlington's Balsam of Life

Olive R. Jones and Allen Vegotsky

Robert Turlington (1697-1766), weaver, patent medicine vendor, and entrepreneur left his mark in our archaeological record. Bottles embossed BY THE KING'S ROYAL PATENT GRANTED TO / ROBT TURLINGTON FOR HIS INVENTED BALSAM OF LIFE / JANUARY 26 1754 / LONDON bear witness to a medicine marketed in distinctive packaging for close to 175 years. Turlington successfully used several strategies to market Balsam of Life, but was less able to protect Balsam of Life from imitators. After his death, his business survived until 1804. The distinctive bottles were still being made in 1919.

Turlington's patent, dated 1743/44, listed 27 ingredients in an alcohol solution, all having perceived medicinal value at the time. Over time, the number of ingredients significantly decreased. His advertisements described numerous ailments treatable by Balsam of Life. In a highly competitive environment, Turlington, and others like him, with no formal medical training, selling pre-packed medicines to people he would never meet, was called a quack and an empiric. In his time, Balsam of Life was consistent with current medical practice and would have been considered appropriate for treating many of the disorders claimed in his advertising.

Robert Turlington (1697-1766) était un tisserand, un vendeur de médicaments brevetés et un entrepreneur ayant laissé sa marque dans les données archéologiques. Les bouteilles portant la marque embossée BY THE KING'S ROYAL PATENT GRANTED TO / ROBT TURLINGTON FOR HIS INVENTED BALSAM OF LIFE / JANUARY 26 1754 / LONDON témoignent de ce médicament mis en marché dans un emballage distinctif pendant près de 175 ans. Turlington aura réussi à utiliser différentes stratégies de marketing pour son Balsam of Life, mais aura moins été en mesure de protéger son produit contre les imitateurs. Après sa mort, sa compagnie survivra jusqu'en 1804. Les bouteilles distinctives seront encore fabriquées en 1919.

Le brevet de Turlington, datant de 1743/1744, énumérait 27 ingrédients mélangés à une solution à base d'alcool. Chacun de ces ingrédients était perçu comme ayant une valeur médicinale à l'époque. Au fil du temps, la quantité d'ingrédients diminuera de façon significative. Ses publicités décrivaient les nombreuses conditions médicales que le Balsam of Life pouvait traiter. Turlington, de même que d'autres comme lui, œuvrant sans formation médicale dans un milieu très compétitif et vendant des médicaments pré embouteillés à des gens qu'il ne rencontrerait jamais, était considéré un charlatan. À cette époque, le Balsam of Life correspondait aux pratiques médicales du moment et il aurait été considéré comme étant un médicament approprié pour traiter plusieurs des malaises mentionnés dans ses publicités.

Introduction

By the early 18th century, the medicine business in Great Britain was unregulated by either guilds or government (Porter 2003: 48–55). No central authority or authorities controlled protocols for diagnosis, preparation of medicines, or treatments. True causes of diseases were not known. Although it was understood that symptoms were not necessarily the same as the disease, in many cases differentiating one from the other was not possible. In general custom, it was believed that when the symptoms were alleviated the treatment/medicine was considered to be successful. Treatments were based on a variety of conflicting medical theories, many dating back to classical Greece (Porter 2003: 60). Common treatments included

bleeding, purges, emetics, diuretics, opiates, alcohol, spices/herbs, scented waters, mercury, and other metals. Opportunities for entrepreneurs were limitless. Accusations of quackery, obfuscation, lies, ignorance, and skullduggery flew from physicians to apothecaries to chemists to druggists to quacks to empirics and back again. As Porter (2003: 16) put it, quacks were other people: "Nobody ever called himself a quack." Both trained and untrained persons based their treatments on the same theories, the same authorities, the same raw materials, and depended on the same sources of information, such as published formulas. Both groups were trying to make a living in a highly competitive marketplace. Some chose to extend their market beyond

personal contact to patients that they would never meet. As access to information about treatments was widely available, many patients actively diagnosed their own illnesses, choosing treatments and medicines from a variety of sources. Medicines mattered. Pills, powders, and liquids promised consumers relief from suffering, inconvenience, and debility. Where illness, accidents, and death were ever-present, fortunes could be made (Jewson 1974; Porter 1985, 2003: 55–74, 84–85).

Examining in detail Robert Turlington's marketing strategies for Balsam of Life, his various business successes and failures, his successors, and how his medicine and its packaging survived into the 1920s is a useful study of the history of packaging and of marketing techniques used by 18th-century entrepreneurs.

While bottles are tangible evidence of the medicine, Balsam of Life itself was the real product. The ingredients listed in the original patent specification are identified, and their perceived medicinal value in the 18th century is discussed. With caveats, ailments are linked to ingredients in the original formula. This article also includes a brief look at subsequent, much simpler formulas, bringing the history of the medicine into the 20th century.

Robert Turlington and His Balsam of Life: Defending the Authentic

Close association between product and packaging had become common by the mid-18th century. Many factors influenced the development of these relationships: geography, custom, government legislation, guild controls, properties of the commodity itself, technological developments, demands of the marketplace, and attempts by individuals to discourage imitators. Many products became famous because their geographical origin influenced their distinctive qualities, such as Florence wine, scented waters from the south of France, mineral waters from Selter (seltzer), or Pymont. Local production established traditional association between product and its packaging that then guaranteed authenticity in a wider market, such as olive oil in jars and Florence wine in flasks. Bottle makers in some European regions made bottles in different styles for local wine producers (Bossche 2001). Seltzer waters came in stoneware bottles; Spa

and Pymont waters came in glass bottles with distinctive shapes and applied glass seals (Bossche 2001: 183–189, 248–251, plates 133–138, 197–199). By taxing commodities at certain stages in their production or during their transit from one market to another, governments influenced the appearance of packaging. For example, to protect revenue derived from customs duties, the English government prohibited the importation of wine in bottles. As a consequence, English black-glass bottle factories made the bulk of their income from domestically produced wine/beer bottles (Jones 2010: 114, 117–118). From medieval times, guilds controlled production in cities and surrounding areas. To distinguish their products from those of others, guilds developed ways of identifying their own production, such as marks on pewter, silver, or clay smoking pipes. In some jurisdictions glass bottles were also marked (Bossche 2001: 48–49, figures 25–26). Properties of a commodity dictated what packaging was suitable or convenient. Liquids had to be put in water-tight containers, such as wood, ceramics, or glass, while powder containers could be a variety of materials, including paper. Fortified wines, like port, matured in glass bottles, rather than casks. In the mid-17th century, British glass manufacturers introduced the black-glass wine/beer bottle. Its development was influenced by the introduction of coal-fired furnaces. Full-size, two-piece, open-and-shut bottle molds made it possible to make glass bottles in unusual shapes and/or to emboss words and/or images on them. Worldwide distribution of products stimulated the shipping and storage of some commodities in smaller packaging, not just in bulk. While much depended on corporate control, individual entrepreneurs became increasingly influential in the development of distinctive packaging for specific products.

In the British Isles many generic glass-bottle shapes were available by 1700 (Noël Hume 1956: 98–103). Using generic bottles, entrepreneurs identified their product in the general marketplace by applying a wax seal with certain marks on it and/or by using paper wrapping or labels. Richard Stoughton described his packaging: “[E]ach Bottle is Seal’d with his own Name in a Cypher, and round it, Richard Stoughton, with a Paper of Directions with it

stamp with the same, or else 'tis a Counterfeit" (*Spectator* 1712). Thomas Lake described his packaging as "each Bottle, Jar or Parcel of Flower of Mustard-Seed of mine, is sealed with my Name, Thomas Lake, round the Seal, also the King's-Arms, with my Name pasted, on each bottle" (*Daily Journal* 1730). Although it is not clear whether Robert Turlington was the first to use embossed, distinctively shaped bottles, in 1746 he introduced the first datable example. Vendors of prepackaged medicines and products with medicinal uses, such as scented waters, mustard powders, and snuff, were the first individuals to use distinctive bottles and packaging to guarantee the authenticity of their wares.

Basic to all the associations between product and package was the need to protect income from imitators. Innovations developed by medical entrepreneurs included distinctive packaging specific to that product alone. Marked glass bottles or ceramic pots, labels or wrapping bearing the proprietor's name or signature, and wax seals bearing a coat of arms or other insignia were some of the strategies used. These distinctive markings were emphasized in newspaper advertisements and handbills. Robert Turlington's Balsam of Life was one of several successful patent medicines marketed in the 18th century, including Bateman's Pectoral Drops, Godfrey's Cordial, Hooper's Female Pills, Dalby's Carminative, Steer's Opodoldoc, Betton's British Oil, and Daffy's Elixir. Their success was marked by longevity, as all survived into the 20th century. Packaging made a significant contribution to their survival for 150 to 250 years.

For close to 100 years Robert Turlington's Balsam of Life has been studied by scholars interested in the history of patent medicines and successful branding. English researchers have tended to focus on its early years (*Chemist and Druggist* 1905: 525; Buckley 1933; Styles 2000: 148–158). North American researchers, studying bottles from archaeological sites, have followed its use and production into the 20th century (Griffenhagen and Young 1959; Ridley 1966; Noël Hume 1969: 43–44; Watters 1987: 307–313). Online resources, providing easy access to newspapers, baptism/marriage/burial documents from the London Metropolitan Archives (LMA) and wills from the National Archives in London, have made it possible to

add new information and more details of Turlington's life, his businesses, and those of his immediate successors.

When Turlington patented Balsam of Life in January 1743/44 he had two issues: how to make money from his medicine and how to protect that income from imitators. Most strategies he used combined both goals. He had the cachet of having the king's approval of his medicine, a fake coat of arms, a memorable name, a booklet given free with every purchase, a fixed price, and testimonials from satisfied customers, who provided information on ailments that could be treated successfully with Balsam of Life. His extensive use of newspaper advertisements and distinctive packaging emphasized his proprietary product. To protect his medicine from competitors, he introduced distinctive bottles that have been found on many archaeological sites in North America. He wrapped the bottles in a bill of directions that he signed himself. In advertisements he warned of the dangers of "spurious compositions." He emphasized his rights as a patent holder. In principle, the patent provided him with 14 years of protection from imitators and with legal recourse to prosecute infringers. Although the patent expired in 1758, Turlington and his successors continued to claim that no one else had the true formula for making Balsam of Life. As these strategies were used by many other nostrum vendors, the detailed discussion in this paper applies to general business practice in 18th-century Britain and North America. Balsam of Life was an early successful example of how to develop and market a unique product.

In order to understand the sequence of some events discussed in this article, it is important to note that, until 1752, Great Britain used the Julian calendar (Cranfield 1962: xiii–xiv). The year began on Lady Day, 25 March, so that 1 January to 24 March came at the end of the year, not at the beginning. That is, 25 March 1743 came before 1 January 1743. Both years for January to 24 March were often given in newspapers and business correspondence, written as 18 January 1743/44, for example. In 1752, Great Britain began using the Gregorian calendar that has January at the beginning of the year. Even before the change, some sources, like the *Whitehall Evening-Post: Or London Intelligencer* in 1749, had begun to use

the Gregorian calendar without indicating that they were doing so. For several years after 1752 some continued to use the old dating system, writing "os" or "ns" after the month, indicating that they were using old style or new style dates. In this article, both year dates for 1 January to 24 March are given to clarify the sequence of events prior to 1752.

Robert Turlington, Weaver

Robert Turlington's roots were in Bethnal Green in London's East End, in the parish of St. Dunstan's and All Saints, Stepney, where he and family members were baptized and buried (TAB. 1). Both Turlington and his father were weavers. Robert Turlington was apprenticed to John Oudart, citizen and weaver, 7 June 1714, and received the Freedom of the City of London in June 1721 (TAB. 2). He started at age 17, older than the customary apprentice age of 14 years. As was customary, he continued to be

a member of the Company of Weavers even after he changed careers. In 1737 the *London Gazette* published four long pages of bankrupts from all parts of the country. Turlington was one of them:

The under-mentioned Persons being Prisoners for debt in the King's Bench Prison in Southwark, hereby give Notice, that they intend to take the Benefit of the late Act of Parliament made for Relief of Insolvent Debtors, at the next General or Quarter Sessions of the Peace to be held for the County of Surrey, viz. ... John Lewis, late of Saint George the Martyr in Southwark, Victualer; Robert Turlington, late of Saint Botolph Bishopsgate Without, London, Weaver. (*London Gazette* 1737)

Between 1725 and 1736 he was a tenant in Half Moon Alley, which ran west off Bishopsgate Without, just east of the city walls (TAB. 2) (Hyde 1981: 11). Liverpool Street Station tracks now cover this location.

Turlington was likely a silk weaver. Most weavers from London's East End—Bethnal

Table 1. Turlington, Wray, and Sopp families

Name	Comments	References
Robert Turlington 1697–1766	Weaver, patent medicine vendor, and merchant; member of the Company of Weavers, London	LMA 1697, 1714/1721, 1766a; National Archives 1766a
Joseph Turlington (Thurlindine) 1673–1710/11	Robert Turlington's father; weaver	LMA 1673, 1697, 1710/11, 1714/1721
Jane Turlington (Forry) [1669]–1748/49	Robert Turlington's mother; died at his residence in Ball Alley	LMA 1748/49; <i>Whitehall Evening-Post: Or, London Intelligencer</i> 1748/49a, 1748/49b; National Archives 1766a
Mary Pailliard (Turlington) 1710–1789	Robert Turlington's sister; married to Phillip Pailliard	LMA 1710; National Archives 1766a, 1789 [1788]
Martha Wray (Pailliard) [1739]–1788	Robert Turlington's niece; Mary Pailliard's daughter; married to William Wray; part-owner of medicine business with Mary Sopp and Hilton Wray, 1766–1788	LMA 1760, 1765, 1780, 1788; National Archives 1766a, 1766b, 1788, 1789 [1788], 1792; <i>World</i> 1788; <i>Daily Advertiser</i> 1796
William Wray [1731]–1766	Robert Turlington's business partner; married to Martha Pailliard	LMA 1760, 1765, 1766b; National Archives 1766b; <i>Saint James Chronicle</i> 1766
John Wray [1738]–1773	William Wray's brother; briefly in charge of medicine business, January–August 1773	<i>General Evening Post</i> 1773a; LMA 1773
Hilton Wray [late 1730s]–1812	William Wray's brother; part owner of medicine business with Martha Wray from 1773–1788; by himself 1788–1804; bankrupt in 1804; member of the Company of Clockmakers, London	<i>General Evening Post (London)</i> 1773b; <i>Universal British Directory</i> 1791: 154; National Archives 1792; <i>London Gazette</i> 1804, 1805; Baillie 1947: 349
Mary Alder (Sopp) 1734–?	Daughter of Robert Sopp, Robert Turlington's wife's brother; until her marriage, was active in the medicine business 1766–1774	LMA 1734, 1774; National Archives 1766a; <i>Craftsman; or Say's Weekly Journal</i> 1774

Table 2. Turlington, Wray, and Sopp events

Date	Comments	References
1714–1721	Turlington's apprenticeship and Freedom of the City paper	LMA 1714/1721
1725–1736	Turlington tenant in Half Moon Alley	LMA 1725–1726, 1736–1737
1736–1737	Turlington in debtor's prison	<i>London Gazette</i> 1737
1740–1752	Turlington tenant in Ball Alley, off Lombard Street	LMA 1740–1741, 1752–1753, 1753–1754
1742	Turlington began selling Balsam of Life	Turlington [1742–1748]
18 January 1743/44	Turlington received patent for Balsam of Life, provided protection for 14 years	Patent Office 1856
1746–1748	New bottle style introduced and used (FIG. 3)	<i>London Evening-Post</i> 1746
1748	Patent extended to North American colonies	<i>General Advertiser</i> 1748:1
1748–1750	New bottle style introduced and used (FIG. 4a)	Turlington [1748–1750]
1750–1754	New bottle style introduced and used (FIG. 4b)	Turlington [1750–1754]
1752–1804	Business address became King's Arm's, later No. 14, Birch Lane	LMA 1752–1753, 1753–1754; <i>Morning Chronicle</i> 1804
1754–[1920]	Final bottle style introduced (FIGS. 4c, 6)	Turlington [1754–?]; Cumberland Glass Manufacturing Company 1919: 30
1758	Patent protection expired	
October 1766	Robert Turlington and William Wray died; Martha Wray and Mary Sopp took over medicine business	TAB. 1
January–August 1773	John Wray took over medicine business	TAB. 1
August 1773	Martha Wray, Mary Sopp, Hilton Wray in charge of medicine business	TAB. 1
1774	Mary Sopp married, left business	TAB. 1
1774–1788	Martha Wray and Hilton Wray managed business; business called by various names: Medicinal Warehouse; M. and H. Wray; Messrs. Wray and Co.; Wray's Medicine Warehouse; Wray and Co.	TAB. 1; <i>Morning Chronicle and London Advertiser</i> 1774; <i>London Chronicle</i> 1781a, 1781b; Brown 1976: 153
1788–1804	Hilton Wray managed the business; Common councilman for Langbourne Ward from 1787 through the 1790s; bankrupt in 1804	TAB. 1; <i>Whitehall Evening-Post</i> 1787; <i>Morning Post and Fashionable World</i> 1795

Green, Spitalfields, and Shoreditch—were silk weavers, many of them Huguenots who fled France after the Revocation of the Edict of Nantes in 1685 (George 1925: 176). He apprenticed with John Oudart, his sister married Phillip Pailliard, and his mother's maiden name was Forry. The silk business was multidimensional in terms of labor organization and products made. It was also volatile, dependent on fashion, subject to interruptions in trade, and oversupplied with labor. Weavers rioted many times in the 18th century, protesting their low earnings (Campbell 1747: 258–261, 284–294; George 1925: 176–195; Plummer 1973: 292–339).

Robert Turlington and the Patent-Medicine Business

After his bankruptcy, Turlington chose a new career. At this point it is not known how he financed this new business, or how he established a network of suppliers and distributors for his transatlantic trade. He may have joined someone already in the business, possibly through marriage, learning how to process medicines, perhaps buying the formula for Balsam of Life from someone or adapting a published formula, such as that for Baume de Commandeur (see below). Turlington certainly

took advantage of the marketing techniques developed by other medical entrepreneurs (Alpe [1888]: 129; Crellin and Scott 1972; Doherty 1990; Haycock and Wallis 2005: 1–35; Curth 2008). As a weaver, Turlington may have had experience in identifying and selling fashionable goods, connections in overseas trade, and organizational skills. Even if he did not have direct experience, he had certainly worked in an industry where people with those skills surrounded him.

In 1740 he moved to Ball Alley, off Lombard Street, where he first sold Balsam of Life. Ball Alley was almost a cul-de-sac running beside All Hallows churchyard, with only a small passage leading into George Yard, tucked in behind buildings on Lombard Street (TAB. 2) (Hyde 1981: 26). Here Turlington had an unsympathetic neighbor:

As I have been prevented by the Unkindness of Mr. Fossey, Goldsmith, in Lombard-Street, from keeping up my Sign from being publicly exposed to the Observation of my Friends, by its being in publick View at the Corner of Ball-Alley, Lombard-Street. It becomes necessary to inform my Friends I still live there, and will use them in every Circumstance of my Dealings, with the usual Integrity (without selling them a Second hand Commodity) and hope for the Continuance of their Favours. (*London Courant* 1747)

Turlington moved in 1752 to two leasehold premises at the sign of the Kings Arms (later No. 14) in Birchin Lane, which ran between Lombard and Cornhill. The Birchin Lane premises, two doors from Lombard Street and “near the Royal Exchange,” were larger and on a main thoroughfare between two important streets. They served as residence, warehouse, manufactory, and shop. Birchin Lane ceased to be the business address following the bankruptcy of Hilton Wray, the last owner of Turlington’s business (TAB. 2). In 1804 the leases for both properties were put up for sale:

The valuable and very desirable LEASEHOLD PREMISES, of Mr. HILTON WRAY, druggist, a Bankrupt, most eligibly situated, No. 14, Birchin-lane, Cornhill, containing six bed chambers, with numerous closets, dining room, convenient kitchen, pantry, excellent double-fronted shop, counting house, laboratory, private entrance, and under ground warehouse, and ample cellarage for wine, beer, and coals; together with the adjoining house, No. 15, which is let on lease to Mr. Gibson, grocer, at 35 l. per annum, the whole held for an unexpired term of twenty years from Mid-summer last, at a very low reserved rent. (*Morning Chronicle* 1804)

The building was likely four or five stories high (Heal 1972: plate V), with bedrooms and closets (small private rooms) on top floors; dining room, kitchen, and pantry on one floor; and the shop, counting house, and laboratory on the ground floor. The location of the counting house is inferred from a robbery report:

Whereas the House of Mr. Robert Turlington, in Birchin-lane, Lombard-street, was on Saturday Night, or on Sunday Morning the 18th Instant, broke into, and robb’d of all the Money in the Shop, and from out of one of the Desks in the Compting-house took away a Chrystal Stone Girdle Buckle. (*Public Advertiser* 1758)

Judging by testimonials dated 1742 and 1743, Turlington sold Balsam of Life before he received the patent. This practice was not unknown. Earlier in the century Stoughton sold his Great Cordial Elixir for many years before he patented it in 1712 (*Flying-Post* 1700; *Spectator* 1712; Griffenhagen and Young 1959: 162). By 1748, Turlington was famous enough in London to be included in a satirical print with other well-known vendors of proprietary medicinal products (FIG. 1).

On 18 January 1743/44, Robert Turlington received a patent for his “Specific Balsam, called the Balsam of Life.” In 1748 he extended the patent to include the North American colonies (see below). From the beginning, Turlington marketed his medicine aggressively, advertising frequently in London newspapers. Not only did he threaten to prosecute patent infringers, he defended his rights in the court of chancery. In 1758 the patent protection expired, providing others the opportunity to get the official formula from the patent office and legally manufacture it themselves. Turlington died in late October 1766, leaving the business to his partner William Wray, who unfortunately died within days: “Last Night died Mr. William Wray, in Birchin Lane, Successor to Dr. Turlington, who died the Beginning of the Week” (*Saint James’s Chronicle* 1766). William Wray was married to Martha Pailliard, daughter of Robert’s sister Mary, and was often referred to in advertisements as Robert’s nephew, based on his marriage to Turlington’s niece. Under the terms of Robert’s will, Martha inherited all the property and businesses on the death of William Wray. Mary Sopp, Robert’s wife’s niece, was to receive £2,000 and a share in the business, from which

she was to get a one-third share of the profits. In early November, Martha Wray and Mary Sopp announced that they were successors to both men (*Public Advertiser* 1766). To defend their rights, they embarked on a vigorous advertising campaign in 1767, claiming that Turlington had passed on his method of making Balsam of Life to them alone. William's brother, John Wray, took over the business in January 1773. Unfortunately, he died in August. Another brother, Hilton Wray, then joined the business (TAB. 2):

MARTHA WRAY, MARY SOPP, and HILTON WRAY, take this method of acquainting the Merchants, Captains of Ships, Country Dealers, and the public in general, that on the death of the late Mr. John Wray (of whom the said Martha Wray is the sole Executrix) the business is reverted to them, the said Martha Wray and Mary Sopp; and that they, together with the said Hilton Wray, now carry on the same, in partnership, at the Original Warehouse, the King's Arms, No. 14, Birchin-Lane, London. (*General Evening Post [London] 1773b*)

After Mary Sopp married John Alder in 1774, she was no longer mentioned in advertisements, suggesting that she stopped being active in the business, although she continued to be close to Martha Wray and Mary Pailliard. Both women named her as their executrix in their wills, making bequests to her son Daniel. At this point Martha and Hilton changed the company advertisements, no longer focusing on Balsam of Life, indicating that they were going into the general proprietary-medicine business (TAB. 2):

At the above Warehouse are sold Daffy's, Stoughton's, Squire's, Radcliff's, and Bostock's Elixirs; Golden and Plain Spirits of Scurvy-Grass; Hungary, Lavender, Rose, Honey and Citron Waters; Hooper's and Anderson's Pills; Bateman's Drops, British Oil, Godfrey's and several other sorts of Cordials; and also several other articles in the medicinal way. (*General Evening Post [London] 1774*)

Martha Wray died in 1788: "On Saturday evening about nine o'clock, died in Mark Lane, Mrs. Martha Wray, widow of Mr. William Wray, formerly Druggist of Birchin Lane, Cornhill. From her charitable and exemplary character, her death will be lamented by all who know her" (*World* 1788). Hilton Wray continued the medicine business until his bankruptcy in 1804.

In spite of their vigorous defense, the Turlington/Wray/Sopp families were unable to keep control of Balsam of Life. Even before 1758, the patent had not protected Turlington from imitators or pirated versions. As he commented in 1756:

And notwithstanding the many vague Attempts to impose upon the Public, under the various Names of Balsams, Elixirs, Pectorals, Viper Drops, &c. the World may easily perceive, that though their SUBTLE CRAFT may impose upon the Ignorant, the Penetrating and Wise will surely be extremely cautious to have or recommend The Genuine BALSAM OF LIFE. (*Gazetteer and London Daily Advertiser* 1756)

Once the patent expired in 1758, there was no legal way to protect the Turlington brand. Consequently, others safely made and sold their versions of Balsam of Life. Although Martha Wray and Hilton Wray continued to advertise the medicine in the 1780s (*Adams's Weekly Courant* 1780), it appeared more frequently in advertisements of other firms, such as that of Cluer Dicey, E. D. Ockell, & Company, which included it in its lists of proprietary medicines for sale (*Edinburgh Chronicle* 1760; *Read's Weekly Journal* 1760). Turlington's distinctive bottle was available for general use. Joseph Ridgeway, dealer in china and glass, also sold Turlington's, Stoughton's, Godfrey's, and Bateman's bottles (*Public Advertiser* 1771). In 1777, English manufacturers of lead and vial glass published an industry-wide price list, offering large and small Turlington bottles (*Prices of Glass Goods* 1777).

In the 19th century, English glass manufacturers continued to offer Turlington's bottles and his medicine was included in general advertisements for patent and proprietary medicines, such as those by Thomas Butler of London (*Bell's Weekly Messenger* 1822; *Atlas* 1843). However, by 1870, English glass manufacturers supplying chemists and druggists had dropped Turlington's bottles, even though they continued to make vials for British Oil, Daffy's Elixir, Dalby's Carminative, Godfrey's Cordial, and Essence of Peppermint (Beatson & Co. 1867: 15, 16, 17; York Glass Company 1868: 7, 8, 11, 13). In its 1866 catalog, S. Maw & Son (1866: 182-183) offered Turlington's Drops, but its later catalogs did not. In 1876, Barclay & Sons of London obviously felt there was still commercial potential in Turlington's bottle. They registered

it under the new trademark act, stating it had been in use 50 years before 12 June 1876 (*Trade Marks Journal* 1877: 400). Whether or not their registration was challenged has not been investigated. Thirty years later, the *Chemist and Druggist* (1905: 525) published a photo of a Turlington's Balsam of Life bottle, calling it an "interesting relic." As the bottle's owner came from the Newbery family, 18th-century rivals of Turlington and his successors, the author also commented that "[n]ot the least advantage of being associated with a business which one's great-grandfather was in is that now and then some rich pearl of antiquity comes to light among one's belongings." He noted that Turlington's was still in the National Formulary with the same formula as Balsamum Traumaticum, Vulnerary Balsam, and Friar's Balsam.

In North America, even before the American Revolution, druggists in the United States made their own versions of Balsam of Life. For example, between 1765 and 1770 the Philadelphia firm of Christopher and Charles Marshall ordered directly from Turlington, then Martha Wray, but in December of 1770 they ordered "5 Gro: Small Fine Turlg Bottles" along with other vials and pharmaceutical equipment from Vigor & Stevens, a Bristol glassmaking firm (Marshall and Marshall 1765-1770: 39, 67, 116, [120]). After the Revolution, English versions were so much more expensive that American druggists preferred to make their own, generally using English-made bottles. English versions of Balsam of Life were still imported and sold (Griffenhagen and Young 1959: 171). In 1833, the Philadelphia College of Pharmacy published revised formulas for eight 18th-century English patent medicines, as their investigations had shown that there was no consistency in the formulas in use at the time (see below). American and Canadian glass manufacturers made Turlington's Balsam of Life bottles up to ca. 1920 (see below). The last advertisement found for named Turlington's Balsam was in 1937 (*Trenton Evening Times* 1937).

By the King's Patent

Turlington's patent, No. 596 (1744), was entitled: "Medicinal Compound. TURLINGTON'S SPECIFICATION," and described as "[a] Specific Balsam, Called the Balsam of Life." The published version, from the mid-19th century, stated that Turlington received the

"Great Seal of Great Britain" on 18 January 1744 (Patent Office 1856). However, this date did not take into account that the Julian calendar was in use. In fact, Turlington's patent came into effect in 18 January 1743/44. As required, Turlington submitted his specification within four months, presenting it before King George II on 11 May 1744, and the patent was enrolled 12 May 1744. As the patent came in force before the specification was filed, the beginning date for the patent is 18 January 1743/44. Turlington's early advertisements all emphasized his exclusive rights to the medicine (*General Advertiser* 1744/45a). Both the formula and the medicine's preparation, the subject of the patent, are discussed later in this article.

In the mid-18th century, the patent office had no system in place to investigate the patentee's claims of novelty, nor were there standards to judge the accuracy or completeness of the specification (MacLeod 1988: 40-55). Instead, the official view was that challenges would come through the courts, which in this period had virtually no precedents on which to draw (MacLeod 1988: 60-64, 68-74). However, after Michael and Thomas Betton patented British Oil in 1742, they were challenged by Edmund Darby & Co. of Coalbrook-Dale on the basis that a previous patent had been taken out in 1693 for the same product. Darby also claimed that he and his predecessors had been selling the medicine for almost 100 years. At the end of the investigations the patent was declared invalid because of the earlier patent (Griffenhagen and Young 1959: 159-160). In his advertisements, Turlington did threaten to take infringers to court and, in fact, did so in the court of chancery. As MacLeod (1988: 80) pointed out, patents "began to be used more aggressively as instruments of competition, by artisans and manufacturers who sought to carve out limited monopolies of production and sale." MacLeod (1988: 85-87) also noted that some patents were used in the way in which registered trademarks are now used, particularly those for proprietary medicines.

Taking out a patent in England was time consuming and expensive, often needing at least two months to shepherd the application through a bureaucratic maze and costing £130 (MacLeod 1988: 75-77). Nevertheless, between 1740 and 1760 medicinal products accounted for 22% of patents (MacLeod 1988: 154). Balsam

of Life was only the eighth medicinal product to be patented in England after 1700, although five others were subsequently patented in 1744, and these were soon followed by many more (Alpe [1888]: 129–138). Those offering prepackaged medicines were entering a crowded field, as the *Gentleman's Magazine* listed 202 nostrums for sale in London in 1748, more than half of them bearing a person's name, including Turlington's (Porter 1985: 166–168).

The patent originally applied to England, Wales, and the town of Berwick-on-Tweed, but did not include Scotland or Ireland, as each required separate applications. However, in 1748:

Last Week a Patent pass'd the Great Seal to Robert Turlington, of Ball-Alley, Lombard-Street, London, to extend the Patent already granted him, for his Majesty's British Dominions, to all his Majesty's Colonies and Plantations in America, for the sole making, vending and selling the Balsam of Life, (in his former Patent mentioned) in his said Majesty's Colonies and Plantations. (*General Advertiser* 1748)

It is not clear whether the expiration date of patent protection for the North American colonies was the same as for the original patent, or the protection there extended to 1762. Turlington's advertisements in Philadelphia and New York newspapers, dating to ca. 1760, warned about imitators using his bottles and forging his signature on bills of directions. He offered a reward of £20 when the offenders were convicted, suggesting that he believed that his patent rights were still in effect in the American colonies.

As the earliest advertisements emphasized his patent protection rather than the illnesses his medicine "cured," Turlington probably chose to patent his medicine so that he had legal recourse against imitators. He used George II's coat of arms on his bottles and on his bill of directions (see below) to reinforce his legal protection, but also to impress prospective customers that his medicine had royal approval. One drawback to the patent was that its protection lasted for only 14 years. The other was that the specification described the invention, making it easier for competitors to claim their version copied the patented one.

Turlington constantly warned against "spurious compositions," but did not say who was making or selling them. Robert James (1747: 741–743), after giving several formulas for different "artificial" balsams, including one

for Balsam of Life that bore no resemblance to Turlington's formula, went on to comment about two variants of Balsamum Traumaticum:

Both these are made in Imitation of a Medicine, which has been of considerable Use in private Families, call'd the *Jesuit's Drops*, or *Fryer's Balsam*. There are, I believe, at least twenty People in *London*, who get a comfortable Subsistence by selling it as an Arcanum, under various Names and Titles. And one has had the Impudence to obtain a Patent for it, tho', in order to [do] this, he must have been obliged to swear it his own Invention, in Defiance of Conscience and the Pillory, notwithstanding that *Pomet* publish'd the Receipt, in his *History of Drugs*, many Years ago. It is much celebrated Abroad, under the Name of *Baune de Commandeur de Berne* or the *Commander's Balsam*. (James 1747: 743)

Later in the-century, Adair, a retired medical doctor, lamented that

medical men who have applied to the patent-office, have perpetually been disappointed; for they have always found that, instead of a new, and heretofore unknown, remedy, the patentees have constantly imposed on the public, composition of drugs which had long been in use in regular practice; only altered either in the proportion of the ingredients, or by some trifling additions for the mere purpose of disguising it. (Adair ([1787]: 204)

After Turlington's death, Wray and Sopp felt compelled to state that they alone had the true recipe for making Balsam of Life, at one point declaring that Jackson & Son did not have it (*Gazetteer and New Daily Advertiser* 1766b: 1). Thomas Jackson & Son responded in another advertisement:

Mess. Jackson having observed several Advertisements of Mrs. Martha Wray and Mary Sopp in the public News Papers, affirming, that 'Mr. Turlington never disposed of the Receipt for making his Balsam to any one but themselves, &c. and that Thomas Jackson and Son, have impudently advertised that they are lawfully possessed of the Receipt for making the said Balsam, think it necessary to lay the Fact before the Public, to whom they appeal, by which they will perceive they are truly and lawfully possessed of the same. ...' His [Turlington's] Patent expiring in 1758, Mr. Jackson then applied to the Keeper of the Records at the Rolls for an Office Copy of the original Receipt, &c. which was granted to him upon Stamp Paper, authenticated by Henry Rook, Esq; Clerk of the Rolls. The little Art and Fallacy with the Imposition on the Public, is thus unveiled and detected; therefore the said Thomas Jackson and Son, without giving Way to Reflection or Abuse, shall only say, they hope to receive the Continuance of the Favours of their numerous Correspondents, as usual. (*Public Advertiser* 1767)

Dr. Thomas Anderton of Philadelphia called his version of Turlington's Balsam the "True American Balsam," claiming that it was "faithfully prepared from a true copy of the original receipt, taken out of the Chancery-office, in London, where it is recorded on oath, when the patent was granted" (*Pennsylvania Packet* 1772).

Until 1758, Turlington had exclusive rights to manufacture and sell Balsam of Life, but any legal challenge to counterfeit versions had to be brought by him and defended in the court of chancery (see below). The patent protected his formula, but did not include protection for his named version of the medicine or its packaging. However, the patent protection provided by the king continued to be perceived by Turlington, his successors, and imitators as an integral part of the medicine's identity. The phrase "By the King's Royal Patent" continued to be embossed on bottles into the early 20th century (see below).

Coat of Arms

Turlington claimed a coat of arms: three leopard heads in a row (FIG. 2). As three leopard heads in a chevron are found on the coat of arms of the Weavers' Company (Plummer 1973: title page), he likely chose the leopard heads in acknowledgement of his continued link to the weavers. Along with the royal coat of arms, Turlington's was intended to add prestige and some protection to the medicine. It was embossed on his earlier distinctive bottles, included in newspaper advertisements, and in the Bill of Directions. Turlington stopped mentioning it in his advertisements by the mid-1750s. Later, Hilton Wray stamped both Turlington's and his own coat of arms on the cork and/or wrapper, probably in wax (Wray and Wray [1774–1788]). Hilton's coat of arms consisted of three martlets, small birds placed in a row, like Turlington's leopard heads. Turlington was not alone in using a coat of arms, as many other patent- and proprietary-medicine vendors gave themselves one. As early as the 1660s, Lionel Lockyer, originator of Lockyer's Pills, used a fake coat of arms (Crellin and Scott 1972: 1184, 1186n25).

Balsam of Life

Not only did Turlington have medical precedence for naming his medicine "balsam

of life," but the phrase had layers of meaning dating back to antiquity. In the medieval period accounts of the siege of Troy included descriptions of how King Priam treated his son's body. Instead of burying Hector, he placed him aboveground on display, surrounded by precious materials. Tubes circulated balsam throughout the body, keeping it fresh and sweet smelling, giving him the appearance of life. The original balm, or balsam, was rare, growing only in certain places, harvested at specific times of the year in very small quantities, and consequently it was very expensive. It was noted for its sweet smell and ability to prevent or slow putrefaction (Truitt 2009).

The alchemist Paracelsus (1493–1541) thought that as long as remnants of the original composition of a physical being remained (such as a dead body), its essence, or astral form, still contained a latent life, which he called balsam of life (Hartmann 1887: 127).

In the 18th century, "balsam of life" had come to have both spiritual and corporal connotations. John Locke (1632–1704) recommended that scholars, as studious and sedentary men, needed to get enough sleep: "[T]his I am sure, sleep is the great balsam of life and restorative of nature" (P. King 1830: 184). Tobias Smollett, in *The Life and Adventures of Sir Launcelet Greaves* (published serially from 1760 to 1762), had one of his characters complain to his friends about the person who bled him: "I take you all to witness, that there surgeon, or apothecary, or farrier, or dog-doctor, or whatsoever he may be, has robbed me of the balsam of life—he has not left so much blood in my body as would fatten a starved flea" (Smollet 2002: 14). In the 1780s, James Graham, proprietor of the "Temple of Health" and the "Celestial Bed," considered seminal fluid to be the "balsam of life" (Porter 2003: 222–247; Stephanson 2004: 35–36). Charles Lamb quoted John Priestley (1733–1804) about the importance of friends who focused on spiritual values that "such fellowship is the true balsam of life: its cement is infinitely more durable than that of the friendships of the world; and it looks for its proper fruit and complete gratification to the life beyond the grave" (Fitzgerald 1876: 364). Lamb lamented that he had no friends of this type. In naming his medicine Balsam of Life Turlington drew on a phrase that emphasized the medical and spiritual solace it offered.

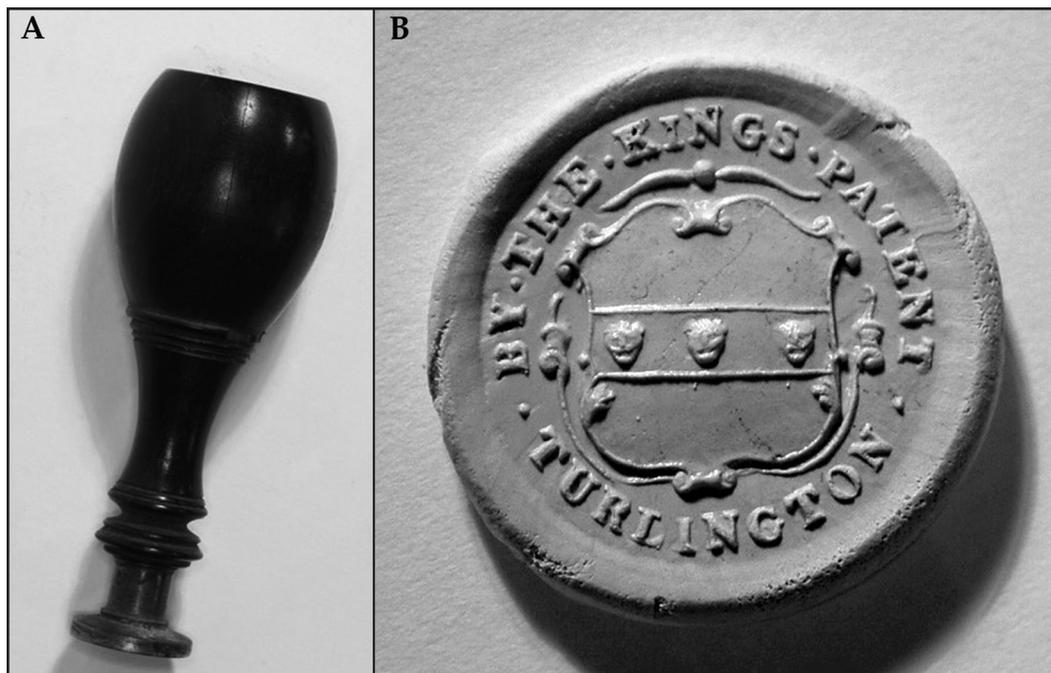


Figure 2. (a) Desk seal in a style dating from late 18th to the mid-19th century (Finlay 1990: 184, figure 325). (b) Impression from desk seal showing Turlington's Coat of Arms with three leopard heads in a row, surrounded by TURLINGTON/BY THE KINGS PATENT. Seal is 2/3 inch (2.0 cm) in diameter, the size used to seal corks placed in bottles with folded-in, strongly flared lips, like those in Figure 10. (Photos by J. Kemp, 2011; courtesy of a private collection.)

There were other balsams on the market. John Newbery, book publisher and vendor of several proprietary medicines, sold Balsam of Health, claiming it was an improved version of Fryer's Balsam (*General Advertiser* 1744/45b). By 1760, Newbery preferred to compare Balsam of Health to Turlington's Balsam: "The original Balsam of Health, being of the same Quality, and equal in all Respects to that sold under the Title of *Turlington's Balsam of Life*" (*New-York Gazette* 1761a). Hoffman's Balsam of Life had a long history as well, lasting well into the 19th century (*Whitehall Evening-Post: Or, London Intelligencer* 1758). Fryer's Balsam, or Friar's Balsam, has a confusing history. It was called by this name by at least the 1740s, and an advertisement for it in 1751 offered it in an embossed bottle:

FRYERS BALSAM Is sold at the Passion-Flower in Long-Acre, near St. Martin's-Lane, very neatly Prepared from *Le Commandeur De Berne's Receipt*, with the very best Ingredients, at One-Shilling a Bottle; which, to prevent Impositions, has on one Side the Impression of a Passion-Flower; on the three others, Fryer's Balsam, by A. Brace, Long-Acre. (*General Advertiser* 1751a)

However, in 1777 Robert Grubb received a patent for Friar's Drops, which became known as Friar's Balsam or Grubb's Fryar's Drops (Alpe [1888]: 132). In later years Friar's Balsam became synonymous with Turlington's Balsam, both ending up as compound tincture of benzoin in the professional pharmaceutical literature.

The Bottles

As a liquid, Balsam of Life came in bottles. According to newspaper advertisements, Turlington first sold his medicine in round vials, but in 1746 felt he had to protect his medicine from imitators by introducing a distinctive shape (FIG. 3):

In Order therefore to prevent any further Impositions to the Publick for the future, the Proprietor has thought it necessary to alter the Form and Model of his Bottles; from a round Phial to a square white Phial, on one Side of which is his own Coat of Arms, with the King's-Arms over it, as in the Margin; and on the opposite Side are the following Words cast in the Glass, *R. Turlington, by the King's Patent*. And the said Proprietor is determin'd to prosecute,



Figure 3. Bottle style introduced in 1746 and used until 1748 (*London Evening-Post* 1746).

with the utmost Rigour of the Law, any Person or Persons who shall for the future counterfeit, or in any Manner howsoever imitate or resemble the said Medicine, contrary to the said Letters Patent. (*London Evening-Post* 1746).

The round vials were likely cylindrical with a flanged lip, a standard shape for medicine containers, made in sizes ranging from $\frac{1}{2}$ to 16 oz. (*Prices of Glass Goods* 1777; Hawkes and Hawkes 1895; Noël Hume 1969: 42–43, figures 36–37). They were likely made in “vial glass,” a good-quality, aqua-colored, non-lead glass.

The square vial, on the other hand, was made in colorless lead glass (often called white), in a specially designed two-piece bottle mold with a surprising quantity of information incised in it. As far back as 1600 English glass manufacturers used full-size open-and-shut molds to make stems for drinking glasses. Around 1720 they were used to make pedestal stems, some embossed: God Save King George (Charleston 1984: plates 14–15, 37e). Turlington’s bottles, beginning in 1746, are the earliest known dated bottles blown in full-size open-and-shut molds. While he may not have been the first to use embossed bottles, he was certainly the first to make repeated efforts to use bottles to defend his proprietary rights.

Medicine vials in aqua or colorless lead glass were made in table-glass factories, not in black-glass bottle factories. Black-glass factories and flint-/vial-glass factories had, traditionally, made different products (Jones 2010: 91, 94, 111–112, 117–118). After 1745, when excise duties were applied to English and Scottish glass manufactures, the traditional associations were codified. Flint and vial factories paid higher excise duty than black-glass factories. From the Turlington evidence it is clear that flint and vial factories were using full-size open-and-shut molds to make

bottles by the mid-18th century. Black-glass bottle factories did not start using these molds until around 1800 (Jones 2010: 126–128).

When Turlington described the bottle as square, he may simply have meant “flat sided” (Jones 2010: 142–144). Although the image suggests the bottle had concave corners, it may simply be a representation of a rectangular bottle. According to the drawing, the bottle was wider at the bottom than the top. There was no lettering on the ends of this version, nor did it bear a date. At present, no actual

example of Turlington's first distinctive bottle is known.

In 1748, Turlington once again felt he had to change the bottle style to protect his medicine from imitations (FIG. 4a). This version featured more lettering, with a curved front and back and two flat ends:

Note: In the Margin is the Make of the Bottle, which the Patentee has been obliged again to alter, to a Phial oval in the Fronts (on one Front of which is embossed the King's Arms and the Patentee's, and on the other Front thereof is wrote long ways ROBERT TURLINGTON BY THE KING'S PATENT) on one Side of which Phial is MAY 2^d, and on the other, 1748, being the Date of such last Alterations which the Patentee has been obliged to make, to prevent any farther Imposition on his Majesty's Subjects by several Persons who have caused Bottles to be made resembling the Patentee's. ... Wherefore the said Patentee thinks proper to give this publick Notice of the said Fraud, and of his altering his Bottles in the Manner aforesaid, in order to prevent any Persons for the future from being imposed on by a Set of People, who, having no Regard for the Welfare of Mankind, would, for the Sake of Interest only (if not prevented) sacrifice the Lives of many Thousands; of which the Patentee thinks it his Duty again to inform the Publick, that they may not for the future be imposed on by a Set of such inhuman Wretches. (Turlington [1748–1750])

Although he illustrated the new shape in an advertisement, he actually described the previous 1746–1748 bottle style. In this advertisement Turlington promised “to prosecute, with the utmost Rigour of the Law, any Person or Persons who shall for the future counterfeit, or in any Manner howsoever imitate or resemble the said Medicine, contrary to the said Letters Patent” (*London Gazetteer* 1749). Archaeologists found an example of this style in London (Styles 2000: 152; Museum of London 2014). Unfortunately this change did not work either, as someone else had the new bottle shape made at the White Friars glasshouse, one of London's flint and vial houses (*Penny London Post, or, the Morning Advertiser* 1749; Buckley 1934: 308):

August 17, 1749.

Whereas great Numbers of Bottles have been blown at our Glass-house, of the same Shape and Size, and having the same Marks, as the Bottle in which Mr. Robert Turlington puts his Balsam of Life, by virtue of the King's Patent,

out of the Moulds brought to our Glass-house by some person or persons for that purpose, and which Moulds so brought we then apprehended were brought by the Order of the said Mr. Turlington; but as we have since been informed, that the said Moulds were neither brought, nor sent, by the said Mr. Turlington, but by some evil-designing persons, to impose on us, and also on the said Mr. Turlington, by putting therein some Composition made by them to resemble his Balsam of Life; now we think this Notice will be a Caution to all Glassmakers for the future from being imposed on in the same Manner as we have been.

ANTHONY SEAL, Sen.

ANTHONY SEAL, Jun.

In order the better to discover any person or persons that have, or shall hereafter blow, or cause to be blown, any Bottles, of the same Shape, Size, and having the same Marks of the Bottles in which the said Mr. Turlington puts his so much esteemed Balsam, called *Balsam of Life*, doth hereby promise a Reward of Ten Pounds on the Conviction of any Person that have, or shall for the future presume to do the same, as Witness by Hand,

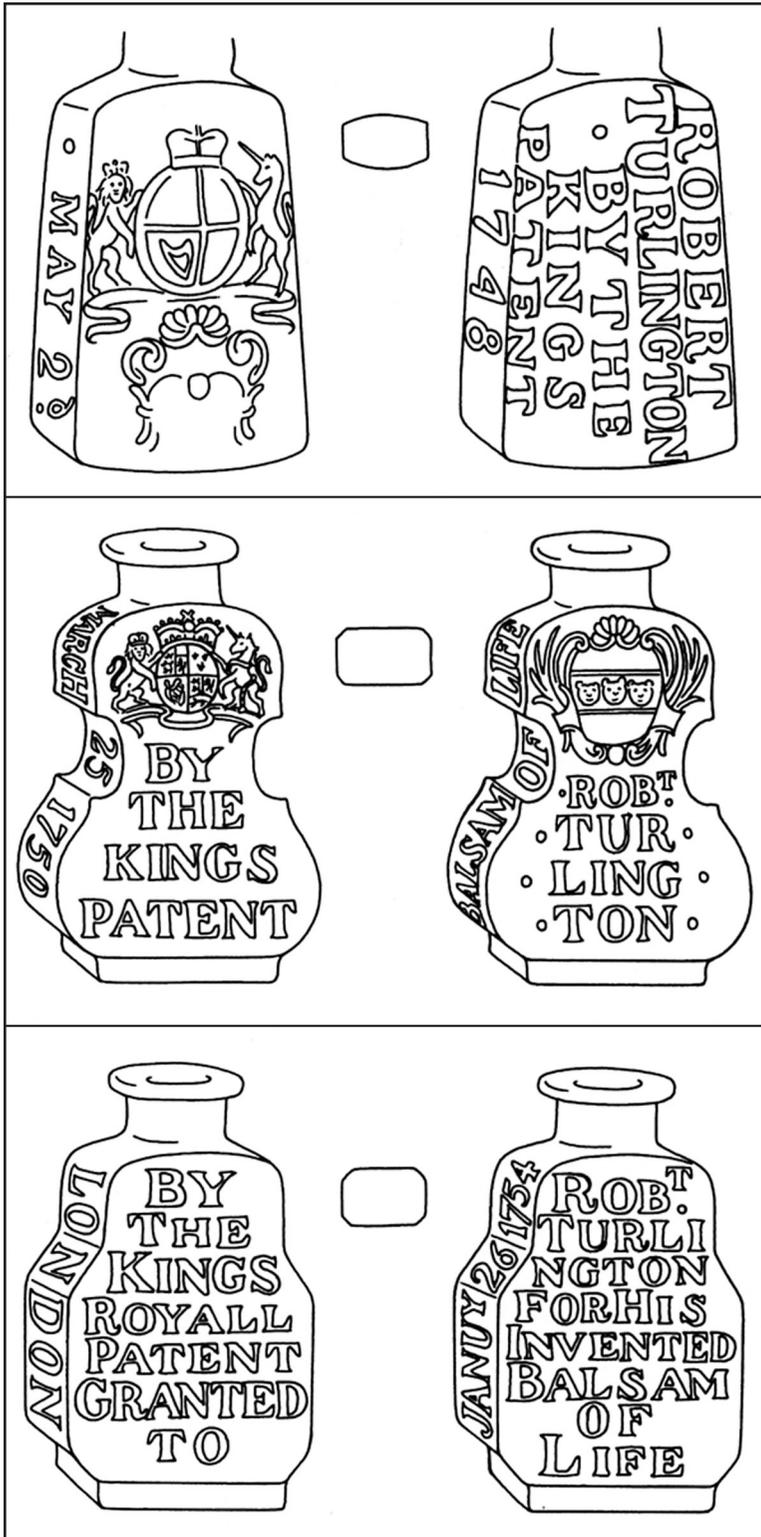
ROBERT TURLINGTON,

Ball-Alley, Lombard-Street.

In several August issues of the *Whitehall Evening-Post*, this ad was followed by one or more of Turlington's testimonial ads. It is impossible to know whether White Friars glasshouse already made Turlington's bottles or not. Perhaps the owners, Anthony Seal Sr. or Jr., thought that Turlington had sent someone, with whom they were not familiar, with new molds, or that they were getting new business from him. At any rate, Turlington took this opportunity to threaten other glass manufacturers.

Once again, in 1750, Turlington changed his bottle style, changing it to a violin shape (FIG. 4b). Archaeological examples have been found at Williamsburg and Montserrat; the latter is embossed: 1751 (Noël Hume 1969: 43, figure 37; Watters 1987: 308):

Note, In the Margin of each Bill of Directions is the Make of the Bottles my Balsam is now sold in, in order that each Person may know when they have the right, which Bottle is in the Shape of a Violin, on the Top of which, on one Side is the King's Arms, and underneath BY THE KING'S PATENT; on the other Side, my Coat of Arms, being Three Leopards Heads, and underneath ROBERT TURLINGTON; and on



one Edge of the Bottle is, BALSAM OF LIFE, on the other, MARCH 25, 1750, being the Date of this new Alteration, which I was obliged to make, to prevent the Villainy of some Persons, who buying up my empty Bottles, have basely and wickedly put therein a vile spurious Composition, not have the true Efficacy expected therefrom; as this Evil may (if not prevented) prove very injurious to the Patient, I would therefore advise all Persons to be very particular where they have it from, and to be well satisfied they are served with the true Balsam. (Turlington [1750-1754])

Unfortunately, this new shape failed to protect him from imitators. Turlington tried, for the last time, to use the bottle style to guarantee the authenticity of his medicine (FIGS. 4c, 6-10):

[T]he shape of the Bottles (which contain the true and genuine Balsam) is NOW alter'd to the Form described in the Margin of these Bills, on each of which Bottles the following Words are blown in the Glass, viz. on one Side, BY THE KING'S ROYAL PATENT GRANTED TO, and on the other Side, ROBERT TURLINGTON FOR HIS INVENTED BALSAM OF LIFE; on one Edge, LONDON, on the other Edge, Jan. 26, 1754, being the date of this new Alteration. (Turlington [1754]; Ridley 1966: 24)

Figure 4. (a) Bottle style used 1748-1750; (b) bottle style used 1750-1754; and (c) Turlington's final bottle shape, introduced in 1754 and made as late as 1920. (Drawings by D. Kappler, Parks Canada, Ottawa, 1996.)

In 1763 Turlington complained that “some Persons in his Majesty’s Plantations in America particularly in the Cities of *Philadelphia* and *New-York*” were bottling “[s]purious and Counterfeit Medicines in imitation of the *Original Balsam of Life*” in used Balsam of Life bottles or “other bottles of the same Make and Form, as those used by the Patentee” (*Pennsylvania Journal, and Weekly Advertiser* 1763b). In London, L. Haskins obviously imitated Turlington’s bottle, but used his own wording (FIG. 5) (*Public Ledger, or, Daily Register of Commerce and Intelligence* 1760).

From 1777 onwards, pricelists from English glass manufacturers included large and small Turlington bottles, clearly intended for a wider market than the Wrays’ business (*Prices of Glass Goods* 1777, 1809; Hawkes and Hawkes 1895: 266–267). After the American Revolutionary War and the War of 1812, American pharmacists/druggists continued to use imported English-

made Turlington bottles (*New-York Daily Advertiser* 1817; Griffenhagen and Young 1959: 173). Early efforts to establish glass manufactories in North America were beset by insufficient capital, lack of experienced workers, and intense competition from English manufacturers and exporters. Embargos and non-importation restrictions between the two countries, from 1807 to 1814, gave the nascent American glass industry time to develop. At the end of the War of 1812, English glass flooded the American market. In addition to their stockpiles of unsold goods, for glass manufacturers the drawback (taxes returned under the excise system for goods exported) actually amounted to more than the excise tax originally paid. This was essentially a bounty (Jones 1981: 20–21). As a result many American glass factories closed. However, American glass manufacturers continued to make Turlington’s bottles, as well

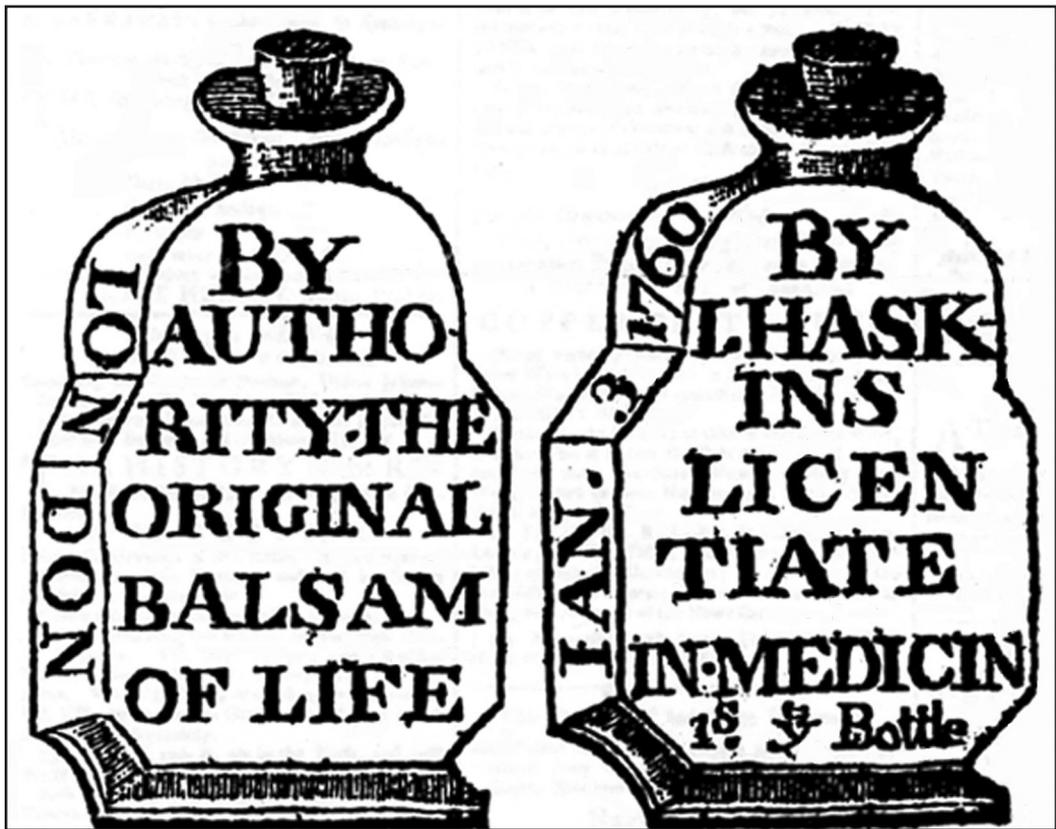


Figure 5. A blatant copy of Turlington’s bottle style by L. Haskins. His price was lower than “other” balsams that Haskins claimed were “for many years kept up and sold at a very extravagant Price; but for the general Good of the Public, that the most indigent Persons may not be deprived of its kindly Influence, I sell this *Genuine Balsam of Life*, truly prepared, at One Shilling the Bottle” (*Public Ledger, or, Daily Register of Commerce and Intelligence* 1760).

PATENT MEDICINE VIALS

	No.	Per Gross	
			
No. 58	58 Bateman's	\$7.00	
	59 British Oils	7.75	
	60 Turlington Balsam	7.00	
	61 Essence Peppermint...	6.75	
	62 Vermifuge	8.50	
	63 Godfrey Cordials	7.75	
	Harlem Oils	6.75	
	Nerve & Bone Liniment	7.75	
	Dalbays Carmative	7.75	
	Liquid Opodeldoc.....	8.00	
	Solid Opodeldoc W/M, let'd	8.00	No. 62
			
No. 59			
	No. 60		
			
	No. 61		
			
	No. 63		

Figure 6. Last dated catalog found illustrating Turlington's embossed bottle (Cumberland Glass Manufacturing Company 1919: 30). Many bottles blown with this lettering continued to have: JANY and LONDON on the edges. Embossed on the other side would be: BY THE / KINGS / ROYAL / PATENT / GRANTED / TO. Traditional bottles for Bateman's, British Oil, and Godfrey's Cordial were also offered in this catalog. (Courtesy of the Museum of American Glass, Wheaton Arts and Cultural Center, formerly Wheaton Village, New Jersey.)

as several other famous English patent-medicine vials (McKearin and Wilson 1978: 53, 82, 284-285, 291-293). After tariff protections were introduced in 1824, American glass-bottle producers successfully competed with imported British glass. With an assured supply of American-made bottles, American makers of Balsam of Life no longer needed imported English-made vials.

Under the English excise tax (1745-1845), bottles of less than 6 oz. had to be made in

flint-and-vial factories (Jones 2010: 91). Up to 1845, when excise taxes on the English glass industry were lifted, medicine vials were regularly made in more expensive, heavier, colorless lead glass or high-quality aqua glass. After 1845, cheaper soda-lime formulas could be used. English-made Turlington vials generally had a folded flanged lip or a simple flanged lip. As discussed above, English glass manufacturers making pharmaceutical wares

ceased to offer the bottles by the late 1860s. Turlington vials made in North American factories were regularly made in aqua-colored soda-lime glass—much lighter in weight and more thinly blown. Examples made in the first half of the 19th century generally had a simple flanged lip or a folded lip. Bottles made in the second half of the 19th century had more substantial lips, shaped by a finish-forming tool, and were made in colorless or aqua glass (FIGS. 6–9) (McKearin and Wilson 1978: 284–285; Jones 1981: 18–23, figures 1, 6–10, 13–14). Turlington bottles continued to be made into the early 20th century in both Canada and the United States (FIGS. 6, 8).

Without an archaeological context, Turlington bottles are difficult to date with any precision and/or attribute to a country of

manufacture or factory. Pontil marks on the base indicate manufacture prior to ca. 1850, as do two-part bottle-mold lines crossing the base. In these earlier bottles there is often a horizontal mold line just under the lip, left by the top of the mold (Jones 1981: figure 8). Absence of pontil marks, the use of two-part body molds with a third base part, and finishes shaped by a finish-forming tool generally date from ca. 1850 up to ca. 1920 (Jones 1981: 16–17). Although some variations are known (FIGS. 7b, 9), consumers were reassured by the familiar bottle shape and its wording. Turlington's Balsam of Life bottle enclosed in its wrapper sent a powerful message.

In the 18th century, Balsam of Life came in two sizes consistently, one costing 1s. 9d., the other 3s. 6d., including all the distinctively



Figure 7. (a) Bottle embossed: BY THE / KINGS / ROYAL / PATENT / GRANTED / TO, obverse embossed: ROBT / TURLI / NGTON / FOR HIS / INVENTED / BALSAM / OF LIFE. On one edge is embossed: JANU, on the other: LONDON. Note the squared shoulder and rounded lip in this example; (b) Bottle has same embossed words on front and back as the previous example, but on one end is: LONDON, and on the other: JAN 28 1779. It has a rounded shoulder and patent lip. Other examples of this variant are known. Both bottles were blown in a two-piece body mold with a third base part; neither has a pontil mark. They date after the mid-19th century up to ca. 1920. Both are in aqua-colored glass. (Photos by O. Jones, 2012; Jones collection.)

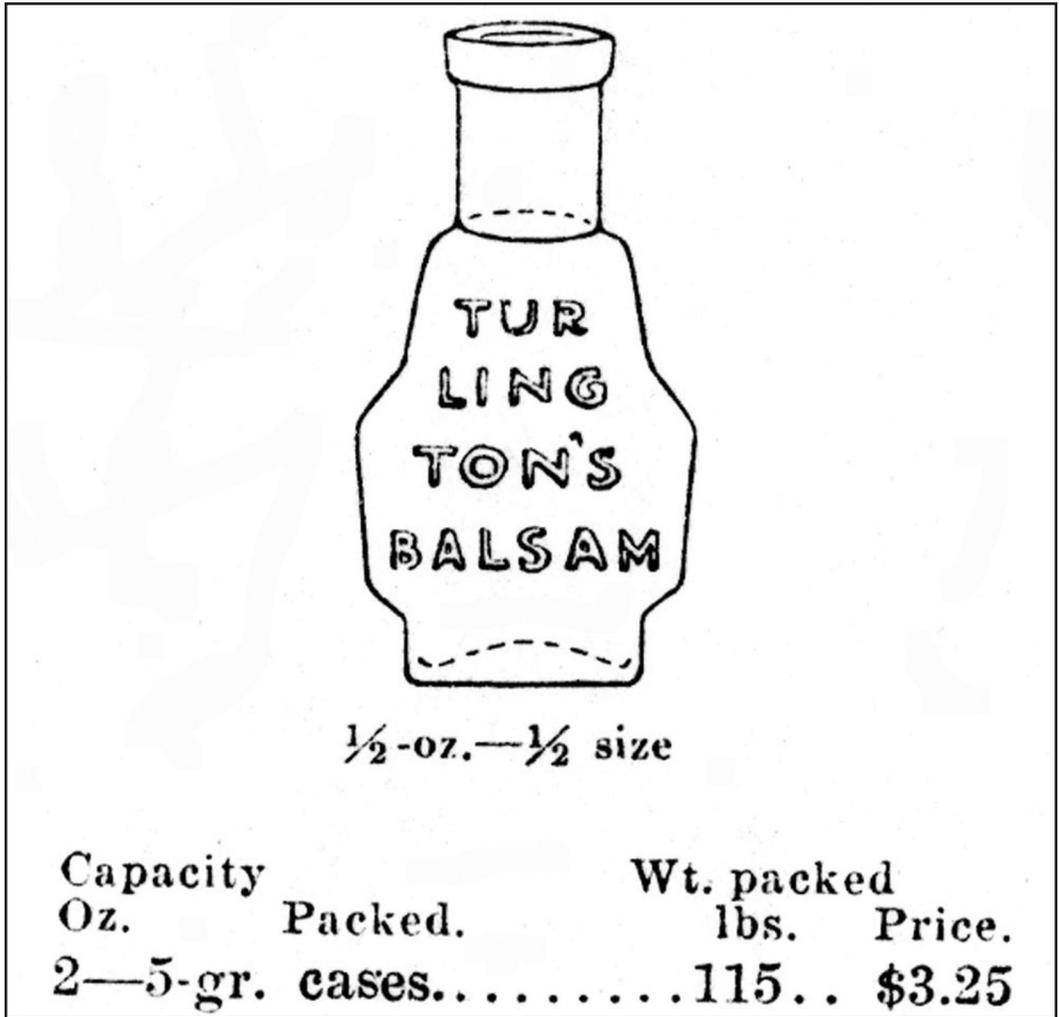


Figure 8. Bottle, embossed with stripped-down wording, illustrated in the Dominion Glass Company druggist glassware catalog. In this catalog the company showed only “our regular lines of stock ware, a full assortment of which we endeavour to have on hand at all times” (Dominion Glass Company [1913–1920]: 7, 62). The company still had the mold in its inventory in 1926.

shaped styles. Turlington stated that the smaller was half size. Extant bottles hold approximately ½ oz., or 15 ml, and the large size 1 oz., or 30 ml. (FIG. 10) (Jeremy Kemp 2012, pers. comm.). At some point the larger size ceased to be made. The last dated reference to the large size is an 1815 pricelist for exported glass by the firm of Hawkes & Hawkes (1815) in Dudley, England. Later English pricelists did not itemize patent-medicine vials individually, instead giving prices based on bottle weight. For example, an 1829 list offered “[b]ottles, moulded best flint for patent

medicines, perfumery &c, weighing two oz. and under” (Hughes 1968: 24–25). A pricelist (ca. 1824–1828), from the Philadelphia & Kensington Vial & Bottle Factory, simply listed patent-medicine bottles by name; only “Opodeldoc” was made in two sizes (McKearin and Wilson 1978: 82).

Proprietary medicines were also included in portable medicine chests designed for travelers, ship captains, and home use. Distinctive bottles were replaced by square or rectangular bottles and identified with a paper label. Turlington’s Balsam of Life was considered



Figure 9. Bottle, simply embossed on both sides: TUR / LING / TON'S / BALSAM, possibly made by Dominion Glass Company of Montreal, and dating to the second decade of the 20th century. Bottle made in colorless glass, with patent lip. (Photo by O. Jones, 2012; Jones collection.)

important enough to be included in a chest with Indian associations (FIG. 11) (Banks 2008: 105–108).

Distinctive bottles used for old English patent medicines gradually disappeared in the early 20th century. Government legislation controlling the sale of patent and proprietary medicines, and significant advances in medical knowledge made these old nostrums obsolete, irrelevant, or illegal. With the introduction of semi-automatic and automatic bottle-making machines, small production runs became uneconomical. An estimate, made in 1927, stated that a minimum of 250 gross was needed for production on the Owens machine. Anything under 100 gross went to plants still capable of making mouth-blown bottles (Miller and Sullivan 1984: 89). Small runs of distinctive bottles were best suited for high-value products, such as perfume and toilet ware (Miller and Pacey 1985). Bottles for Turlington's Balsam of Life depended, then, on factories keeping old molds, a few workmen who could make mouth-blown bottles, and customers who still wanted them. At this point, no examples of Turlington's Balsam of Life bottles made on either semiautomatic or automatic machines are known. Turlington's Balsam of Life sold by



Figure 10. Eighteenth-century large and small Turlington bottles bearing pontil marks, with folded-in flanged lips, were blown in colorless lead glass. They were probably made in England. Both were blown in two-piece bottle molds, as the mold line crosses the base from corner to corner. Larger 1 oz. (29 ml) bottles have base dimensions ranging from 23 × 27 mm to 23 × 32 mm, and heights from 71 to 84 mm; bottles with smaller bases are taller. Half-ounce (15 ml) bottles have base dimensions ranging from 19 × 26 mm to 21 × 27 mm, with heights from 60 to 69 mm (J. Kemp, 2012, pers. comm.). (Photo by J. Kemp, 2012; courtesy of a private collection.)

that name after ca. 1920 would have been sold in a stock pharmaceutical shape, like those used for compound tincture of benzoin, Friar's Balsam, or Essence of Peppermint (FIG. 12) (Jones 1981: 22, Figure 15). These stock shapes could be made by machine in large quantities, using paper labels for identification. The capacities were standardized as well. Judging by its capacity, the 1 oz. Turlington's Balsam, sold for 12¢ by SunRay Drug Company under "Medicine Chest Needs," would have been a stock shape (*Trenton Evening Times* 1937). This was the last dated for-sale reference to Turlington's named medicine found.

Bill of Directions and Turlington's Signature

To guarantee the authenticity of Balsam of Life, Turlington used his signature, placing it on the sheet of paper used to wrap his bottle, which was called the Bill of Directions (FIGS.

13–14). In Turlington's earliest advertisement, even before he received the patent, he complained that his uncommon success had led to imitators. In defense he started signing the Bill of Directions with "R. Turlington" (*London Daily Post, and General Advertiser* 1743). This continued to be his strategy:

They [customers] are therefore desired to be extremely cautious, that they have the Original BALSAM of LIFE, which is wrapt up in a Direction, signed by the Patentee, ROBERT TURLINGTON, in his own Hand-Writing; without which you may be assured they are notorious Counterfeits, and may be of the worst Consequence if taken. (*Whitehall Evening-Post: Or, London Intelligencer* 1761)

In 1767 the New York merchant Gerardus Duyckinck announced that he had "Turlington's Balsam of Life, a Quantity of his last signing, and a Quantity sign'd by Martha



Figure 11. This square vial from a medicine chest bears a paper label of Turlington's Balsam of Life. The chest resembles the one that Turlington holds in Figure 1, a suitable size for traveler and family use. Two bottles in the chest bear labels from businesses in Calcutta, India, and two others have a label from E. Bayley, Chemist in Leadenhall Street, "near the East India House" (Science & Society Picture Library 2014).

Wray and Mary Sopp, the present Proprietors" (*New-York Journal* 1767). Hilton Wray continued the practice: "[E]ach bottle will be wrapped in a direction, signed in the name and with the hand-writing of the said Hilton Wray only, and the bottle sealed with a seal, bearing his coat of arms, and the coat of arms of the said Robert Turlington" (*General Evening Post [London]* 1773b). The seals were impressed in wax (FIG. 2) and were generally used to seal the cork, but two seals suggest they were also used to keep the wrapping in place. The handwritten signature not only offered a guarantee that the medicine was genuine, it also provided a personal connection between Turlington and his customers, few of whom he ever met in person. Unfortunately, Turlington complained that, not only were his bottles reused or imitated, even his signature was forged by counterfeiters in New York and Philadelphia,

and the more easy to impose on the Publick, have Forged, or Counterfeited the said Mr. Turlington's hand writing to Bills of Directions, given with each bottle, or have procured the Patentee's old Directions, and inclos'd their Counterfeit sort in the same, the better to impose on the unwary and credulous. NOTICE is hereby given, That, if One shall discover any Person or Persons so offending, as aforesaid, shall, on Conviction of any such offender or offenders, receive the Sum of TWENTY POUNDS Sterling, to be paid by the said Patentee, to such persons as shall give such Information, or to his or her Agent in London, on the Conviction of the offender or offenders as aforesaid. (*Pennsylvania Journal, and Weekly Advertiser* 1763b)

A number of elements made up the wrapper. On one side (Ridley 1966: 24) was a letter



Figure 12. (a) Compound tincture of benzoin purchased by special order in 2011; and (b) stock bottle shape, with a paper label for Friar's Balsam, purchased off the shelf in an Ottawa drugstore in the early 1970s. (Photo by O. Jones, 2012; Dunning and Jones collections.)

from S. Postlethwaite of Beetham, Westmoreland, dated 11 January 1748. The letter, listing a number of people who had been cured by taking a bottle or two of Turlington's Balsam of Life, appeared also in an advertisement (*Penny London Post, or, the Morning Advertiser* 1748c). All wrappers seen by Jones include the letter. Below it was "Directions for taking TURLINGTON'S Original Balsam of Life," which included an

illustration of the current bottle style, a list of ailments for which the medicine could be used, a verbal description of the bottle describing its shape and embossing, directions for taking Balsam of Life, and where the medicine could be bought in London. On the 1748–1750 and 1750–1754 versions, Turlington listed a number of other patent and proprietary medicines that he also sold, although he rarely mentioned in his



Figure 13. A Turlington bottle wrapped in the “Bill of Directions.” (Digital image provided by D. Cowman, 2010; courtesy of private collection.)

newspaper advertisements that he sold anything other than Balsam of Life.

On the other side of the wrapper was the title: “By Virtue of the Kings Patent TURLINGTON’S Balsam of Life” and a royal

coat of arms. This was followed by a list of 39 ailments, arranged in six columns, and then a “short” list of persons “who have received Relief by TURLINGTON’S Balsam of Life, whose Original Cases are signed by their own hands.” In one version (Turlington [1748–1750]), this list contained 106 names in roughly alphabetical order. Later, shortened versions had only 51 names, consisting of the same people, places, and ailments, but skipping from the Fs to the Rs. Different sizes of these wrappers are known, the earliest one is 24.5 × 37 cm (Turlington [1748–1750]); a later one 24.7 × 38 cm (Turlington [1754]); one for Martha and Hilton Wray is 21 × 35.5 cm (Wray and Wray [1774–1788]); two undated ones from the 19th century, bearing a stamped Turlington signature, are 19.5 × 29 cm (Turlington [1800–1920]) (FIG. 14d).

The wrapper, Turlington’s signature, and the bottle guaranteed the medicine’s authenticity, regardless of who made it. In their review of old English patent medicines, the Philadelphia College of Pharmacy reported in 1833:

In conclusion, the committee call the attention of the trustees to the character of the printed directions for these medicines. We are aware that long custom has so strongly associated the idea of the genuineness of the Patent Medicines, with particular shapes of the vials that contain them, and with certain printed labels, as to render an alteration in them an affair of difficulty. Many who use these preparations would not purchase British oil that was put up in a conical vial, nor Turlington’s Balsam in a cylindrical one. The stamp of the excise [Medicine Stamp Act], the king’s royal patent, the seal and coat of arms which are to prevent counterfeits, the solemn caution against quacks and impostors, and the certified lists of incredible cures, have not even now lost their influence. In stripping these medicines of their extravagant pretensions and false assertions, the committee are aware that they incur some risk of decreasing their sale. (*Journal of the Philadelphia College of Pharmacy* 1834: 30)

In his reminiscences about his apprenticeship in the 1820s, Brewer (1884: 326) recalled that “[m]any, very many, days were spent by the writer in compounding these imitations, cleaning the vials, fi[ll]ing, corking, labelling,



Figure 14. Examples of Turlington's signatures: (a) signature from Turlington's apprenticeship and "Freedom of the City" document. His signature clearly shows that he knew how to write (LMA 1714/1721). (Photo by O. Jones, 2011.); (b) signature from "Bill of Directions" (Turlington [1748–1750]); (c) authentic Turlington signature from legal document (LMA 1754). (Photo by O. Jones, 2011.); (d) stamped signature from a 19th-century "Bill of Directions." (Digital image provided by D. Cowman, 2011.)

stamping with fac-similes of the English Government stamp, and in wrapping them."

At their inception the Bills of Directions were acceptable; their extravagant claims of

cures were commonplace. In the early 20th century many old English patent medicines, including Turlington's, were still wrapped in facsimiles of the Bill of Directions, still bearing



Figure 15. Turlington's bottle and its box, sold by the well-known Canadian company Northrup and Lyman. The bottle is embossed on both sides: TUR / LING / TON'S / BALSAM. Directions are in English and French. Box is labelled: "Turlington's Balsam of Life and Tincture of Benzoin." The box certainly dates after 1874, when Northrup and Lyman moved to Toronto, and likely dates after 1909, following passage of Canada's Patent and Proprietary Medicine Act (Sullivan 1983: 13–14). General graphics and dark lettering on the orange/yellow color also suggest a 20th-century date. The online image showed only the front of the box (Lynch [2009]).

extravagant claims of cures. However, following the 1906 Pure Food and Drugs Act in the United States, these claims fell into the "false or misleading" category (Griffenhagen and Young 1959: 179–181). One solution was to substitute a box bearing no claims (FIG. 15).

In 1783 the British government introduced the first Medicine Stamp Tax, designed to raise revenues on medicines sold or prepared by untrained practitioners, that is, nostrums and "quack" medicines. The act was revised in 1785, at which time authorities prepared a schedule listing 84 medicines that qualified for the stamp tax (Alpe [1888]: 7–16). In order to ensure that the tax had been paid, the vendor

had to submit to the commissioners:

[P]aper covers, wrappers, or labels with his name and any other particulars printed thereon, to denote the value at which the same are to be sold, in order that they may be stamped with the duties and delivered again, from time to time, to such person as occasion shall require; and every packet shall have pasted thereto such stamped cover, wrapper, or label in such manner as the Commissioners shall from time to time direct. (Alpe [1888]: 13)

It was, of course, illegal to reuse the wrapping or to remove evidence that the tax had been paid. As patented medicines were always taxed, Turlington's Balsam of Life made and packaged in England would have had to have the official stamp on the wrapper (Alpe [1888]: 67–68). As quoted above, the Philadelphia College of Pharmacy recognized that the official stamps had become an accepted part of the packaging and were being imitated by American vendors,

likely without legal consequences.

As with all such taxes, later acts closed "loopholes" and addressed grievances, all of which added complexities to complying with the law. Although no advertisements by Martha and Hilton Wray have been found dating after 1785, they had to comply with the act. Ironically, having an official stamp on the packaging added an air of legitimacy to nostrums and, of more practical use to vendors, provided them with a viable way to combat imitators. Steers cautioned purchasers that his packaging for Dr. Steers' Genuine Opodeldoc was

the only means to prevent their being deceived, that the Name of *F. Newbery* is engraved on the

Stamps which are pasted round the Directions on the outside of each Bottle; and as this Distinction has been made by Order of the Commissioners of the Stamp-Office, no Person can imitate it without being guilty of Felony. (*Lloyd's Evening-Post* 1793)

Prices increased because of the Medicine Stamp Tax. In defense, Newbery kept his bestseller, Dr. James' Fever Powder, at the pretax price, but, along with other medicine vendors, offered to pay the tax on larger purchases of other medicines: "[T]hose who purchase at his Warehouse Half a Dozen or more, at a time, will be allowed the Stamps gratis" (*General Evening Post [London]* 1790). Steers, at his "Medicinal Warehouse," sold only one size of Turlington's Balsam at 1s. 10p., up from the old price of 1s. 9p. for the small bottle (*Times* 1795).

Turlington's Free Book of Testimonials

Several examples of Turlington testimonial booklets have survived. Some have a coarse blue paper acting as a cover onto which vendors could write information. For example, Mr. Day, a grocer in Maidstone, Kent, wrote on one copy: "The Drops are Sold at Maidstone by Day a Grocer at the 3 Sugar Loaves the upper end of East Lane. Composed of Gum Guaiacum & Balsam of Tolu"; and, on another copy, Mr. Day added that "I think they are best taken upon a Lump of Lose Sugar" (Turlington [1748-1749], [1749-1752]).

On the title page of the booklets are both the royal coat of arms and Turlington's own, followed by his address, the cost of the medicine, and the title: "By Virtue of the King's Patent Turlington's Balsam of Life. ... The Efficacy and Virtues of which Incomparable Medicine are exemplified by an Account of some of the Cures perform'd thereby, in this Book briefly mention'd" (Turlington [1752-1766]; Young 1961: plate 2).

The next three pages have a flowery paean praising the curative powers of Turlington's Balsam of Life (Turlington [1742-1748]). Some copies include a transcript of a letter from George II, presumably written when he approved the patent:

Whereas our Trusty and Well-beloved *Robert Turlington*, of our City of London, hath represented unto us, That he has with much Study, Application, and Expence, invented a

Medicine which Numbers of our loving Subjects have happily experienced to be efficacious in easing and curing the Stone, Gravel, Cholick, inward Weakness &c. Know ye therefore, That we being willing to encourage an Invention that may be of publick Benefit not. (Turlington [1752-1766]: ii)

The letter went on to emphasize Turlington's exclusive rights to make and sell the medicine for 14 years and cautioned counterfeiters of potential penalties or damages. The rest of the book consisted of testimonials from different parts of England, North America, the West Indies, and Europe, some of them also used in newspaper advertisements, and many of them listed on the Bill of Directions. At the back of some copies of the book are two folded pages, one including the Postlethwaite letter used at the top of the Bill of Directions. The other page had an index: "An Alphabetical List of Cures mentioned in this Book, denoting the Pages on which the several Accounts are inserted." Fifty-six diseases were listed, followed by persons' names and the page numbers (Turlington [1748-1752]). The index only went to up to page 58, even for booklets with 74 pages.

Dating for these booklets is based on the dates given in some of the testimonials and/or the address. Comparative dating comes from the increasing number of pages. Earlier examples have about 44 pages, later ones as many as 74. The books are about 5 × 8 in. (12 × 19 cm) and thin, often with pages unevenly cut. They would have been available for interested customers when they bought the medicine. Repeat customers would not have needed one. As late as 1766 Turlington still offered the book:

The aforesaid Balsam is a certain relief for the gravel, cholic, rheumatism, gout, and sciatic pains, and all colds, coughs, consumptive, pectoral, asthmatical, and nervous disorders, &c. and for any cut, bruise, or the like, as thousands can testify who have been relieved thereby, in the above and other complaints, after every other resource has failed, certificates of which may be seen at large in a book given gratis with the balsam. (*Gazetteer and New Daily Advertiser* 1766a)

After Turlington's death his successors did not mention the book in any of their advertisements. However, during the British occupation of New York in 1777, printer James Rivington offered the book, along with assurances that he had the genuine Turlington's Balsam direct from Martha Wray

and Hilton Wray (*Rivington's New-York Loyal Gazette* 1777). The book has been of sufficient interest that a reprint of the copy from the British Library, London, is currently available (Turlington [1748–1752]).

Newspaper Advertisements

In spite of his statement that “[t]he public papers are daily stuffed with quack advertisements, sufficient to persuade a credulous person that he may secure immortality in the midst of corruption,” Mr. Derway wrote to Turlington about his slave’s successful recovery using Balsam of Life (Turlington [1752–1766]: 65). Advertisements were the lifeblood of 18th-century newspapers. Usually two or four pages long, advertisements made up at least half, and often more, of an issue. Some, like the *Daily Advertiser*, had three-quarters of the paper devoted to advertisements of different types (Smith 1952: 341–345; Cranfield 1962: 207–210). The last page usually featured advertisements for books and “quack” medicines. Some medicines, like those for the anodyne necklace, appeared for decades; others came and went, sometimes changing the text and layout, sometimes not. Turlington, while a frequent advertiser in London newspapers, was not a regular one. In 1749 issues of the *Whitehall Evening-Post: Or, London Intelligencer*, for example, he ran a testimonial for a few issues, a different testimonial several weeks later for another few issues, later repeating some or adding a new one every few weeks. For all of 1761 Turlington repeated the same advertisement in both the *London Evening-Post* and the *Whitehall Evening-Post: Or, London Intelligencer*. This one extolled the virtues of Balsam of Life and included locations for purchasing the medicine, price, and a warning against counterfeits, emphasizing that he himself had signed the Bill of Directions.

Turlington’s advertisements had constant themes: testimonials from satisfied customers; threats of court action against imitators, sometimes offering rewards for convictions; warnings to customers about the dangers of spurious compositions; how to identify the genuine Balsam of Life; and, finally, ailments that Balsam of Life could cure or alleviate. He sometimes included the price and other places where it could be purchased. His advertisements

in 1744/45 emphasized rights given him by the patent and repeated the modest claims made in it for curing stones and gravel, colic, and inner weakness (*General Advertiser* 1744/45a).

In 1748 Turlington began using testimonial advertisements that became his primary advertising technique. He repeated many of the same testimonials in his free booklets. The testimonials were in the form of letters. They described the sufferer’s complaint, unsuccessful attempts to find relief from other sources, and, finally, their “cure” after taking Balsam of Life, sometimes only one or two doses, and seldom more than two bottles. Frequently, witnesses also signed the letter. The letters were a personal narrative, describing the author’s pain and suffering, and his/her search for relief, only to find it in a small amount of Balsam of Life. They provided information that acted as advice to other sufferers. Although often dramatic, the language and descriptions were in keeping with comparable advertisements of the mid-18th century, and, in fact, were more subdued than some. Letters came from Antigua, France, Italy, Malta, Philadelphia, Spain, and Sweden, often from a helpful ship captain or other travelers. In some instances an agent sent in several testimonials, for example, Postlethwaite from Westmorland and Ferdinando Reep at Plymouth Dock (*Penny London Post, or, the Morning Advertiser* 1748b, 1748c). Davis provided testimonials from several farmers whose cows had been cured of “raging distemper” after taking Balsam of Life in a glass of burnt wine or in a pint of ale (*Whitehall Evening-Post: Or, London Intelligencer* 1749a). Another man cured his mare of “mad staggers” by giving her a large bottle of Balsam of Life in a quart of white wine or a quart of ale. After seven bottles she was cured (*Whitehall Evening-Post: Or, London Intelligencer* 1750). These advertisements were obviously in response to an agricultural crisis of some kind and were the only ones mentioning animals. Testimonials performed a vital role assuring potential customers that, not only did Balsam of Life relieve pain and cure symptoms, but, of equal importance, enabled the sufferer to return to work.

Real people wrote the testimonials, as Turlington offered to show the letters at his warehouse: “The Original of the above Certificate, with Mr. Whitborn’s Letter, is to be

seen at Mr. Turlington's House, in Ball-Alley, Lombard-street." (*Penny London Post, or, the Morning Advertiser* 1748a). Did Turlington give some reward for writing them? Critics suggested that nostrum vendors offered free medicine in exchange for a testimonial (Doherty 1990: 279). A neighbor of Turlington, a mathematical-instrument maker in Ball Alley, stated that he was ready to take an oath that he was cured of his ailment, commenting that he had received neither fee nor reward for his testimonial (Turlington [1742–1748]: 27). Advertisements that addressed how to be sure to have the true Balsam of Life included information on the bottle style, emphasized that Turlington's own signature was on the Bill of Directions, and named places where the bottle could be bought. In London Turlington always used the location of his own warehouse, first in Ball Alley off Lombard Street, and then at the sign of the King's Arms in Birchin Lane, "near the Royal Exchange." In later years, after overhead signs were abolished, this address became 14 Birchin Lane. Sometimes he listed agents in other English cities, as well as longtime agent Robert Evans at the Kings Arms in Hanover Square, an address in London's more fashionable West End.

Martha Wray and Mary Sopp, John Wray, and Hilton Wray emphasized that they were the legal successors to Turlington, that they alone had received instructions on how to prepare the true Balsam of Life. They, too, emphasized the dangers of spurious compositions and used their signatures on the wrappers to help identify genuine versions. After the deaths of both Turlington and William Wray occurred so close together, Martha and Mary launched a vigorous advertising campaign in the London papers, increasing the numbers of ads per week and inserting them in more London papers.

In North American newspapers Balsam of Life usually appeared in lists. As most merchants sold a wide range of goods, their advertisements acted as announcements about what they had in stock (*Pennsylvania Journal, and Weekly Advertiser* 1748, 1763a, 1764). Occasionally there were stand-alone advertisements for Turlington's, but these were in response to some perceived pirating of the medicine (*New-York Mercury* 1760). One in the *Quebec Gazette*, repeating part of the text from the Bill of Directions, had no obvious personal or business name attached to it (*Quebec Gazette* 1771).

As Turlington's Balsam of Life became a generic medicine, individual advertisements for it ceased. Many different businesses listed the medicine or bottles by name, or they were subsumed under "patent medicines" (*Kingston Gazette* 1810a, 1810 b; *New Times* 1825; McKearin and Wilson 1978: 82, 413). With the exception of bottle manufacturers' catalogs and druggists' handbooks, public references greatly diminished. As Turlington's Balsam of Life became stock medicine in drugstores and other retail outlets, customers would expect to find it at any number of places, knowing it by reputation or personal experience.

Balsam of Life Customers

Testimonials provide evidence of Turlington's customers. By far the most common group was that associated with shipping trades—ship captains and crew, shipwrights, block makers, lightermen; other occupations included mechanical-instrument maker, hostler and a chamberlain at an inn, driver of a stage wagon, butcher, engraver, blanket weaver, wheelwright, watch-and-chain maker, and gardener to the Bishop of Winchester. These were artisans who would have come under Daniel Defoe's category of "[t]he working trades, who labour hard, but feel no want," who perhaps, sometimes, slid into "[t]he poor, who fare hard" (Porter 1990: 53). Being sick, unable to work, could bring financial disaster. Captain Arnott Kilvington was "violently bad with a continual Pain in the Loins, side and Hips, attended with a gravelly Disorder, so that for three Weeks he was hardly able to get out of Bed, much less to walk." He was cured within three days by taking Turlington's Balsam of Life (Turlington [1742–1748]: 21). Roger Shimins, mate to Captain Elgate,

was for seven Weeks so much disordered with the Flux and Cholick, that he was scarce able to do any Business, when by only taking some of Turlington's Balsam of Life, he was in two Days restored to a fine moderate Appetite, and before he had taken half a Bottle, found himself perfectly well. (Turlington [1742–1748]: 32)

Six witnesses attested to his cure. Almost absent from Turlington's testimonials were any from the upper levels of society. Lord Viscount Galloway's testimonial, supplied by Robert Evans of Hanover Square, stated that

he was saved "from flying gouty pains"; Robert Ladbrooke, mayor, was a witness for J. Williams at the Grocer's Hall in London (Turlington [1752–1766]: 53, 55).

Turlington's full bottle of Balsam of Life cost 3s. 6 p., the half bottle cost 1s. 9 p., both comparable in price to other patent and proprietary medicines in the late 1740s (Porter 1985: 166–168). Working-poor folk would not have been able to buy their own bottles, but may have had access from their parish of birth through Poor Law distributions (S. King 2006: 72–77). Unlike some patent-medicine vendors, who made the dubious offer to treat the poor for nothing, Turlington kept his price firm and unchanged. Fixed prices were a feature of the patent medicine business and, in spite of trade disruptions during wartime and price fluctuations for supplies, the price of Balsam of Life remained constant until the introduction of the stamp tax in the 1780s.

Most of Turlington's efforts to establish Balsam of Life as a proprietary product and to defend it from imitations were print-based—Bill of Directions, free book, written testimonials, newspaper advertisements, and embossed bottles. Their use suggests that he aspired to reach customers that could read or had access to someone who could read. By implication, these were customers who could afford to buy his medicine. Conversely, the very repetition of all these elements made the information contained in them less important, as the "look" replaced the content. Print-based information was also critical for reaching a wider market in Britain and overseas. Without personal contact, newspapers, in particular, with their wide distribution, were vital to develop and keep a market.

Ready-mixed medicines offering numerous "cures" were particularly useful for persons without easy access to medical services or supplies, such as travelers and residents in isolated areas. This is one reason ship captains were so prominent in Turlington's testimonials, recommending and administering medicines to crew and passengers, often witnessing their cures. It is surprising, however, that only two testimonials came from British military personnel. With the amount of travelling they did, they should have been good clients. In 1749 James Ladlie, mason to the Board of Ordnance at Ferryland in Newfoundland, was

cured of rheumatic pains that made it difficult for him to walk across a room (Turlington [1752–1766]: 73); Leas Coats, paymaster to Colonel Carr's Troop of Dragoon Guards, was the other military customer (*Whitehall Evening-Post: Or, London Intelligencer* 1750).

For almost 100 years, beginning about 1780, both Turlington's Balsam of Life and Essence of Peppermint were staple medicines of the North American fur trade in the Northwest, used by explorers, fur traders, and Native Americans (Jones 1981: 27–31, 43–44). Bottles of both medicines have been found on numerous archaeological sites from the Great Lakes region north and west to the Pacific Ocean, easily identified by their shape and embossed lettering (Wedel and Griffenhagen 1954; Ross et al. 1975: 335; Mazrim 2011: 64). One explorer wrote: "An Indian was despatched early in the morning, to meet my men with a supply of the north-west panacea, Turlington Balsam" (Wallace 1932: 215).

In 1781, Peter Pond and Jean Etienne Waden, representing different fur-trade interests from Montreal, were at Lac la Ronge in north central Saskatchewan. After a dispute, Pond allegedly shot Waden in the leg, probably twice. Waden called for "la baume Turleton" to stop the bleeding, but it, unfortunately, did not work. Waden died. In Montreal, Peter Pond was later tried for and acquitted of Waden's death (Innes 1930: 91–97). Alexander MacKenzie administered Turlington's Balsam to a chief and one of his sons, the chief's dose on a lump of sugar and his son's dose in a few drops of water, as MacKenzie observed that the son was near death (MacKenzie 1801: 331–332).

An empty bottle of Balsam of Life was found in an Arikara grave (Wedel and Griffenhagen 1954: 413). An example of the fiddle-shaped style, dated 1751, was found in a burial in a slave cemetery on Montserrat, in the West Indies (Watters 1987: 307–314, figures 11–15). Both examples suggest that Balsam of Life bottles, if not the medicine, continued to have value after death.

According to the testimonials, many took the medicine on recommendations of people they knew or met, never medical practitioners. Parents administered Balsam of Life to children, husbands to wives or other female relatives, ship captains to crew or passengers, masters or mistresses to servants. In the North

American fur trade, the senior person at a post administered medicines to other staff or Native Americans, as few of the posts had medically trained staff (Jones 1981: 28–31; Gale 2009: 118–122).

Distributing Balsam of Life

Testimonials, dating from 1742, show that on some occasions Turlington administered Balsam of Life personally. In October 1742, William Watts met Turlington in George Yard, close to Ball Alley, while Watts was suffering from a violent pain in his bowels. Turlington took him to his house, gave him some Balsam of Life in a glass of usquebaugh (a medicinal version of whiskey), which gave him relief in less than 10 minutes (Turlington [1742–1748]: 33). Ship captain William Mund described how an hour's walk of less than a quarter of a mile caused him to be "taken with such a Trembling and Shivering ... with which I was so fatigued, that ... I was as pale as Death, and ready to expire" (Turlington [1752–1766]: 10). Fortunately, he met Mr. Turlington, who gave him 20 drops in a glass of wine and another dose 12 minutes later. The captain was then able to board his ship. Being short of hands and needing to sail the next day, he was able to work from 2 in the afternoon until 10 o'clock the next morning.

One way to combat counterfeits was to use designated agents who were then listed in advertisements. In London, Turlington consistently gave only his own business address, occasionally including Robert Evans, Brook Street, Hanover Square. In London newspapers he sometimes listed people in other places where Balsam of Life could be purchased: Rotherhithe, Colchester, Windsor, Lynn Regis, Bristol, Kingston upon Hull, Halifax, Leicester, Rochester, Brumpton (*sic*), or Canterbury (*Penny London Post, or, the Morning Advertiser* 1748b; *Whitehall Evening-Post: Or, London Intelligencer* 1749b). He indicated that the named persons had been appointed by him to sell Balsam of Life. As Turlington never gave the occupations of his agents, there is no evidence that he used the distribution system associated with printers/publishers, except in New York, where he dealt with Hugh Gainé. Both newspapers and books had national markets, depending on booksellers or printers in larger urban centers

to distribute their wares to increasingly smaller markets (Brown 1975: 356–357). Many nostrum vendors also used this system. For example, Mr. Dutton sold Dr. Eaton's Balsamic Styptick at several licensed locations in London and named booksellers in Edinburgh, Bristol, York, Derby; printers in Gloucester, Northampton, and Canterbury; a hosier in Nottingham; and a mercer (seller of fabric) in Bath (*London Journal* 1732). Some printers/publishers diversified into the medicine business, taking advantage of their already-established networks to market proprietary medicines. Two such firms survived into the 20th century. John Cluer of London and William and Cluer Dicey of Northampton were printers who joined Benjamin Okell, patentee of Dr. Bateman's Pectoral Drops, to vend the medicine from "Bow Church-Yard" (*London Evening-Post* 1736). Bateman's Drops, sold in a plain cylindrical vial, survived as a brand into the 20th century (Griffenhagen and Young 1959: 167). John Newbery published books, but was also heavily involved in the medicine business, becoming one of Turlington's direct competitors. Two of his medicines were Dr. James' Fever Powder and Balsam of Health. After his death his two heirs separated the businesses (Roscoe 1973: 34–35). In his study of Bath medicine vendors during the second half of the 18th century, Brown (1975) found that they were newspaper printers/publishers, circulating libraries, toy men and perfumers, printers/booksellers/stationers, grocers and dentists, and, finally, apothecaries/chemists/druggists.

Based on the number of testimonials associated with ship captains, Turlington clearly used them to develop his overseas trade. Ship captains were entitled to a certain percentage of cargo space to use for their own speculative ventures, choosing goods they thought could be sold at a profit once they reached their destination. Turlington may also have used wholesale merchants, such as the manufacturing chemist/druggist Thomas Corbyn, who specialized in the North American and West Indian markets (Porter and Porter 1989: 286–295). Turlington certainly kept close watch on his business interests in the North American colonies. For a time, in an effort to counteract counterfeits, he appointed Christopher Marshall of Philadelphia as his

only agent in Philadelphia (*Pennsylvania Gazette* 1753). In 1759, John Milligan claimed he was Turlington's agent for New York:

Whereas Mr. Robert Turlington, Merchant in London, hath been grossely imposed on in having his Balsam of Life, counterfeited and sold for the genuine Balsam. He hath therefore thought it proper to appoint me the subscriber the sole Vender of that Article in this place, and no other. (*New-York Gazette* 1759)

However, in 1761, Turlington claimed that this had never been true:

AND, WHEREAS, Mr. John Milligan, was some Time since, impower'd to vend the same (but not the only One in *New-York*, as he pretends): This is therefore to inform the Publick, that he is no longer authorized by the Patentee, to sell his Genuine Balsam of Life, nor have I any further Dealings with him.

A Parcel of the abovesaid, *Original Balsam of Life*, was sent by Capt. William Davis, to Mr. Hugh Gaine, of *New-York*, who is hereby authorized to vend the same. (*New-York Gazette* 1761b)

Evidence from newspaper advertisements that Turlington consistently used designated agents in any one place is not strong. He placed more emphasis on the authenticity of his signature on the Bill of Directions. Some New York merchants bought directly from Turlington. James Murray, druggist and wholesale apothecary, originally from London, set up business in New York, where he stated that he ordered his proprietary medicines, including Turlington's Balsam of Life, from the original warehouses in London (*New-York Mercury* 1762).

In the Northwest fur trade in North America, from the Great Lakes westward, both trade goods and fur-trade post supplies were accumulated at a central location and then distributed westward through a series of networks. From the 1780s onward, fur traders operating out of Montreal assembled their supplies there, obtaining them primarily from Great Britain and, possibly, some from the new United States. From Montreal, North-West Company canoes, laden with trade goods and fort supplies, set out as soon as the rivers and lakes became navigable, heading for the "lakehead," near present-day Thunder Bay on Lake Superior. Different locations were used, but eventually the company built Fort William. Canoes from the western posts met

them, carrying furs and other items. After they exchanged cargos, each set of canoes returned to its respective base. Judging by archaeological evidence, both Essence of Peppermint and Turlington's Balsam of Life were regularly used by the Montreal-based fur traders. The Hudson's Bay Company, centered in London, gathered all its supplies in England, primarily London, and sent them to York Factory on Hudson's Bay. As time went on, competition between the two companies became untenable, and they amalgamated in 1821. From 1821 to 1853, the Hudson's Bay Company obtained its medicines in London from the Apothecaries' Hall or Evan and/or William Edwards, probably including Essence of Peppermint and Turlington's Balsam (Sussman 1979: 11, 63–64). During the fur-trade era, centralized supply sources tended to standardize the material culture of the fur-trade posts in western Canada and the northwestern United States.

Court of Chancery

The court of chancery, presided over by the lord chancellor or his deputies, handled disputes over inheritance and wills, lands, trusts, debts, marriage settlements, apprenticeships, and other cases involving equity. In certain cases orphans and lunatics became wards of the court. This court provided more flexibility, as it was not bound by the strict rules of the common law courts (MacKinnon 1952: 296–299; National Archives 2012a). Interrogations were held behind closed doors, and "employees" made their living from fees that had to be paid at every turn. Decisions from the court were notoriously slow and expensive. At certain times Turlington threatened lawsuits against imitators, even going so far as to offer £20 for information leading to a successful conviction (*Pennsylvania Journal, and Weekly Advertiser* 1763b). Because of the way cases were recorded and "enrolled," it is difficult to know how many times Turlington was involved in chancery cases. In one case, dating from 1748, Turlington was plaintiff against 14 defendants, any of whom could be named as principal defendants in subsequent actions/files, making it impossible to know whether the case was new or the continuation of the first one (National Archives 2012b). It was likely this case that caused Mr. Denne to insert the following item in the newspaper:

Whereas divers Persons have been prosecuted by Robert Turlington, for vending a medicinal Preparation, resembling that which the said Robert Turlington now sells, called the Balsam of Life: The said Persons so prosecuted by the said Turlington, are desired forthwith to send their Names and Place of Abode, or where they may be applied to, directed for Mr. Denne, at his House in Throgmorton-Street. (*Public Advertiser* 1752: 2)

Richard Dalby was certainly one of the defendants in the 1748 case. In 1749 Turlington made it clear that a verdict had not gone against him, but it is not clear that this was Turlington's case or Dalby's case.

Whereas it has been falsely reported, that a Tryal at Law has been had between Robert Turlington, the Patentee for the Balsam of Life, and Richard Dalby; and that the said Richard Dalby had obtained a Verdict against the said Robert Turlington; and as such evil Report has gained great Credit, to the manifest Prejudice of the said Robert Turlington in his Reputation; therefore in Right and Justice to the said Robert Turlington, and to convince the Public, this Notice is given, that such Report is entirely false and groundless, no Tryal having been had between them, but that such Report has been made and calculated villainously to prejudice and defame the said Robert Turlington in his Character. (*Whitehall Evening-Post: Or, London Intelligencer* 1749c)

In 1760 John Newbery advertised "[t]he original BALSAM of HEALTH: OR (as it is by some persons called) the Balsam of Life," and went on to state:

The Proprietor of this Balsam having fully established his Property (as may be seen by the Proceedings concerning it, in the High Court of Chancery) now offers it to the Public at Eighteen pence the Bottle, which are of the same Size as those sold under the Name of Balsam of Life, for Three Shillings and Sixpence. (*Public Advertiser* 1760: 4)

In the 1790s, Martha Wray's estate became tied up in chancery in a case involving Hilton Wray and Phelps (National Archives 1792). Martha had been looking after Phelps's daughter and had left her a considerable portion of her estate. Hilton Wray was one of her executors. In 1796, properties in Chelsea, Woodchurch, and Kensington were sold by order of the court (see below).

Robert Turlington of London, Merchant

Turlington left weaving behind, embarking on a career as an entrepreneur. In the 1740s he

focused on his medicine business. By the 1750s he seems to have made enough money in the medicine business so that he could afford to invest in shipping, a private madhouse, a privateering venture, and property.

From his involvement in overseas trade, Turlington had many opportunities to meet and do business with ship captains. In addition to North America and the West Indies, he had connections with the East India Company, although not at the highest level. There was the longtime friendship with Richard Taylor, doorkeeper at East India House, to whom he willed £20 "for mourning" (to buy mourning clothes) (National Archives 1766a). Turlington was executor for the estates of John Jewer, carpenter on the *Walpole*, and John Nimond, gunner on the *Colchester*, both East India Company ships (*London Gazette* 1751; *Daily Advertiser* 1755).

By the 1750s Turlington held shares in ships. He was likely part owner of the *Turlington*, reported at various Mediterranean and Atlantic ports between 1750 and 1754 (*General Advertiser* 1750/51, 1751b; *Public Advertiser* 1754a, 1754b). He was one of the owners of the *Patsey*, which took on cargo, paid for by the gross weight, for Henry Laurens of Charleston, South Carolina, in 1750. In 1756 Laurens wrote Turlington requesting him to shame his fellow-owners into reimbursing Laurens £16 3s. 6p., reminding Turlington that "your Balsame is an Article we expend a good deal of in our private Familys & Plantations" (Laurens 1970: 190–191).

However, it was his venture into privateering at the start of the Seven Year's War (1756–1763), also known as the French and Indian War, which was to bring Robert Turlington and his partners William Sherratt and Thomas Smith the most headaches and notoriety (Rizzo 1983–1985: 399–409). Their investment started well: "Yesterday fell down to Deptford, the Antigallican private Ship of War, carrying 22 Nine Pounders, 8 Four Pounders, 16 Swivel-Guns, and 200 Men. All Sailors that are engaged to the said Ship, are forthwith desired to repair on board" (*London Evening-Post* 1756). In late 1756 the *Antigallican* successfully captured two French ships. News of the next capture came early in 1757. Detailed reports of the battle and subsequent events started reaching London in February. In

his letter to the owners of the *Antigallican*, Captain Foster sent this account:

On the 26th of December last, early in the Morning discovered a Sail about seven Leagues off Ferrol, which I chased and came up with her about Twelve at Noon, and proved to be the Duke of Penthièvre, a French East-Indiaman, bound last from Madagascar, and commanded by Capt. Villeneuve, upwards of 1000 Tons, and mounted 50 Guns; I engaged her Yard-Arm and Yard-Arm till after Three before she struck; the French Captain and 12 Men were killed, the second Captain shot through the Shoulder, and 27 more were wounded: I lost 12 Men and 26 wounded. (*London Evening-Post* 1757a)

Both ships needed repairs. Because of bad weather, instead of going to Lisbon, Captain Foster took both ships to Cadiz. There the necessary paperwork was filled out, confirming that the *Duc de Penthièvre* was a legal prize; the French consul complemented Captain Foster on his humane treatment of the French prisoners, and the French crew left for Madrid (*London Evening-Post* 1757b; *Public Advertiser* 1757b). Then things started to go wrong. The French ambassador to the Spanish court claimed that the battle had taken place within cannon shot of the fort of Corunna, making the capture illegal (*Read's Weekly Journal* 1757). Spanish authorities detained both ships at Cadiz and imprisoned the *Antigallican* crew, while waiting for more information.

In spite of efforts by British officials, the capture was declared illegal, based on witness statements that it took place within range of the guns at Corunna. Many were convinced that witnesses had been subjected to bribery and intimidation (*London Evening-Post* 1757c).

From late September 1757 until the end of February 1758, the *London Evening-Post* published 59 letters on its front page, signed by "ANTIGALLICAN," outlining the events surrounding the *Antigallican*/*Duc de Penthièvre* capture and subsequent actions by British, Spanish, and French officials. These letters, which ran from one to two columns in length, expressed strong anti-French, anti-Spanish, anti-Catholic views and extravagant pro-British rhetoric. The British government was in an awkward position, appearing weak in the face of "his Catholic Majesty's" decision, but probably reluctant to force the issue at the risk of bringing Spain into the war. In the end, the *Duc de Penthièvre* was returned to its French

owners and the *Antigallican* was sold to the French, apparently to pay for the losses incurred by the owners of the *Duc de Penthièvre*. *Lloyd's Evening Post* (1758a, 1758b) published the best summary of the whole affair.

After the Spanish decision, there was pressure on the British government to compensate the owners of the *Antigallican*. First it was for money, but without success. The owners then requested a warship that could be converted to a privateer. In 1762 the *Roebuck* was turned over for nine months, renamed the *Royal Antigallican*. Just when the refit was almost completed, peace negotiations commenced, halting work (*Gazetteer and London Daily Advertiser* 1762a; *London Chronicle: Or Universal Evening Post* 1762; *London Evening-Post* 1762).

Although it was rumored that compensation for the *Antigallican* and its prize was to be included in the peace negotiations, that did not happen (*Lloyd's Evening Post and British Chronicle* 1763). According to estimates made by those seeking compensation from the French or Spanish governments, the *Duc de Penthièvre* and its cargo was worth £300,000. The privateer allegedly had cost its owners £10,453 to outfit, and to defend the case another £10,000 (*Gazetteer and London Daily Advertiser* 1762b). Considering these purported costs, it is a tribute to Turlington's entrepreneurial skills and those of his partners that the venture did not bankrupt them. As was customary, the venture had been financed by selling shares. Crew members were guaranteed a share in prizes, but other investors also bought and sold shares. Occasional advertisements listed shares for sale: "To be Sold ... and Sundry shares of the Antigallican Privateer" (*Public Advertiser* 1757a); "For Sale ... Two Shares of Two Eightieth Parts of the ANTIGALLICAN Private Ship of War, William Foster, late Commander" (*Public Advertiser* 1759); "It is said that several Officers who belonged to the Antigallican private Ship of War ... have had considerable Sums offered them for their Shares due to them for that Prize" (*Public Advertiser* 1761). Robert Turlington's involvement in this business finally ceased in 1770:

ANTIGALLICAN PRIVATEER. The accounts of Robert Turlington, deceased, late Treasurer of the said ship, being adjusted and settled, the owners may inspect the same and receive their share of the balance in the hands of his

administratrix [Martha Wray], by applying to Mr. John Wray, No. 14, in Birch-lane, any morning between the hours of nine and twelve. (*Gazetteer and New Daily Advertiser* 1770)

Compensation for those who had shares in the *Antigallican* continued to be an issue almost 20 years later (*Middlesex Journal: Or Chronicle of Liberty* 1770; *General Evening Post [London]* 1775). Throughout the 1760s, whenever there were disagreements with Spain over various international incidents, the *Antigallican* affair was repeatedly cited in London newspapers as typical of the Spanish government's perfidy.

Turlington's encounters with British parliamentarians did not end with the *Antigallican*. In 1763, a parliamentary committee investigated abuses practiced in private madhouses (House of Commons 1768: 1283–1291). The committee considered two issues: how persons were admitted and their treatment once in the private madhouse. Private madhouses were convenient places to put inconvenient relatives. Once people were committed to madhouses by those with legal authority over them, such as a parent, guardian, or husband, it was extremely difficult for anyone concerned about their welfare to locate or visit them, let alone gain their release. Porter (1987: 148–155) suggests that official concerns focused on unlawful confinement of the sane and much less on the treatment of insane persons. Private madhouses seldom called in doctors or apothecaries, and were noted for their punitive measures against persons who objected to being there. Confinement, restraints, no visitors, and no access to pen and paper were standard practice. However, if a concerned party could persuade a magistrate to have the person examined by a doctor or issue a writ of habeas corpus, the inmate could be brought before the magistrate. If the person were judged sane, he or she was released.

Just when a parliamentary committee was assigned to investigate the practices of private madhouses, Turlington, unfortunately, had a second writ of habeas corpus brought against him for one of the women in his establishment (Rizzo 1983–1985: 415–418; Porter 1987: 150–151). Both Turlington and his employee, King, testified. Turlington claimed that he left the management and admission of inmates to King, with general instructions to admit anyone who came to the

door. King, formerly in the wool trade, had managed the house for six years. When he started, there were already lunatics in the house and over the years he had admitted some for drunkenness and some for other reasons. He asked no questions of the person bringing the "boarder." Costs for room and board ranged from £20 to £60 a year. Two well-known "mad-doctors," Dr. Beattie and Dr. Monro, also gave evidence. They stated that Turlington's enterprise was typical of private madhouses. No action was taken on this report, but it did inform the 1774 act requiring a private madhouse to have a license. As Porter (1987: 164–168) has pointed out, Turlington's private madhouse was simply a specialized version of the board-and-lodging business so prevalent in 18th-century London.

Turlington also invested in property. In his will (National Archives 1766a) he listed a copyhold estate in Kensington; freehold estates in Woodchurch, Kent, and in Hastings and Medhurst, Sussex; two freehold premises in Chelsea; and finally, two leasehold houses in Birch Lane. His sister and a first cousin were to get an annuity, paid semiannually from two of these estates.

His Chelsea properties were upriver from the Chelsea Physic Garden, accessible to the city of London by water or road. As late as 1795, this area was still largely market gardens, with housing along various roads and lanes (Cary 1795). According to the route taken by poor-rate collectors for St. Luke's Parish, both properties were located on the Water Side, between Little Cheyney Row and Cheyney Walk. One was described as the "Great House and Gardens," and the second as the "Front House" (Overseers of the Poor of Chelsea 1757: 29). The rent and poor rate for the Great House was considerably greater than that of the surrounding properties. Although Martha Wray, as Turlington's executrix, stated that his parish was St. Edmund the King, at Birch Lane and Lombard Street, Turlington died in Chelsea. He was buried at the family parish church, St. Dunstan and All Saints in Stepney, 28 October 1766 (TAB. 1). Turlington paid the poor tax on these properties from 1757 to 1766, and Martha Wray continued to pay until 1769 (Overseers of the Poor of Chelsea 1769: 33).

According to a different set of records, Martha rented out two freehold properties in

Chelsea, as she is listed as a proprietor in the land-tax assessment books from 1780 to 1788. These properties were also on the water, between Cheney Row and Manor Street, and had two tenants (LMA 1780, 1788; National Archives 1788). In 1796 the two Chelsea properties were sold at the command of the court of chancery. Both lots, each with tenants, had a yearly rent of £22 (*Daily Advertiser* 1796; *Star* 1796). One of these might have been Turlington's "Front House," but the large house with garden had clearly been let go.

From Martha Wray's estate, the Kensington property, which she likely inherited from Turlington, was also sold in 1796. It was described as "a Copyhold Messuage, with offices, garden &c. in Church-lane, Kensington, at present untenanted, but lately let at 44 l. per annum" (*Star* 1796). Also sold from Martha Wray's estate was a property in Woodchurch, Kent, described as a "Freehold Estate in the Parish of Woodchurch near Tenderden, consisting of a Farm-house, outbuildings, and about 237 acres of land, with the timber growing thereon, now in the occupation of John East, at an inadequate rent of 113 l. per annum" (*Star* 1796).

It is difficult to assess Turlington's financial success, as so much money was tied up in property and the business. It has not been possible to verify that the Woodchurch and Kensington properties owned by Martha Wray were the same ones she inherited from Turlington. If they were, judging by their value in 1796, they were substantial properties bringing in considerable annual revenue.

Turlington left the properties and business to his "new partner," William Wray. On William's death they were to go to Martha Wray, and then to their children (National Archives 1766a). Mary Sopp, daughter of Turlington's brother-in-law Robert Sopp, was to receive £2,000 and become a partner "in the trade or business now carried on by me and allow her one third part of the profits to arise therefrom after payment of all expenses attending the same." Modest amounts were left to family members, friends, and his servant Hannah. The London Hospital was to get £100. He directed that his funeral was to cost less than £60. The will was signed and witnessed 28 August 1766. Cash amounts listed in Turlington's will amounted to £2,400, a large sum for 1766.

Turlington's Balsam of Life: Composition and Medical Properties

The sweeping panacea-like claims of cures that Turlington made for his Balsam of Life have been noted above. Based on such seemingly absurd claims, it may be tempting to think of Robert Turlington as a quack, but such a judgment would be premature. In Turlington's time, there were no restrictions on advertising proprietary medicines, and overenthusiastic claims of cures were the norm. A good litmus test for a quack medicine should emphasize its composition in the context of the medical knowledge and practice at the time. This test is applied in the following discussion of Turlington's Balsam. The ingredients listed in the original patent, their reputed medical properties, as understood in Turlington's time, and the relation of these properties to the curative claims of the balsam are considered. The term, balsam, has been defined as a "softening, restoring, healing and cleansing medicine" (Estes 1990: 23) containing benzoic or cinnamic acid or their esters (Richardson and Richardson 2003: 180).

Turlington's Balsam of Life patent (FIG. 16), with its 27 ingredients in alcohol, was a very complex medication, even by 18th-century standards. While it was common in the 18th and 19th centuries to include multiple ingredients in medications, from the 20th century to the present the focus has been on the discovery of highly specific pharmaceuticals or "silver bullets," with one or few ingredients targeted toward a specific ailment. In reality, this balsam contained far more than 27 ingredients, because the preparation called for heating the herbal mixture in alcohol. This process would have released many more ingredients from the plant material ranging in quantity from traces to substantial. Predicting the medical effects of Turlington's medicine is made more difficult because the quantities of compounds extracted by alcohol would have varied significantly with the condition of the original ingredients and the extraction process. In short, the original proportions of ingredients as listed in the patent do not reveal the actual composition of the marketed medicine. Moreover, it is now appreciated that in the polypharmaceutical remedies of the distant past, such as Turlington's Balsam, the whole was not simply the sum of its parts. In these complex

medicines, ingredients can interfere with each other's drug activity (antagonism) or enhance each other's actions (synergism).

While it would be interesting to report on the actual efficacy of Turlington's Balsam of Life, it is not feasible to accomplish this goal by simply examining the ingredients and their concentrations as listed in the patent. It would take extensive research, including clinical trials, to judge the efficacy of Turlington's Balsam of Life by modern standards. What can be done is to consider the physiological actions of the original components of the mixture, while recognizing the limitations on interpretation.

The 27 ingredients in Turlington's patent and their weights are listed below, starting with the major ones like gum arabic, and descending in order to the least prevalent component, macis. These materials were:

Gum Arabic (8 lb.)	Sem. Orticae (1½ lb.)
Oleum (8 lb.)	Gum Mastich (1½ lb.)
St. John's Wort (8 lb.)	Balsam Tolu (1 lb.)
Gum Elemi (7 lb.)	Rad. Angelicae (1 lb.)
Myrrh (6 lb.)	Sem. Faenic Dulc. (1 lb.)
Gum Benzoin (5 lb.)	Sem. Anisi (1 lb.)
Storax (5 lb.)	Cort. Winteran. (1 lb.)
Balsam Peruv. (5 lb.)	Caryophyllae (1 lb.)
Herb. Althea (4 lb.)	Gum Juniper (1 lb.)
Gum Guaic (3 lb.)	<i>Crocus Sativ.</i> (1 lb.)
<i>Aloes Socot.</i> (2½ lb.)	Sem. Coriand. (1 lb.)
Cort. Cinnam. (2 lb.)	Nuces. Moschat. (8 oz.)
Gum Oliban. (1½ lb.)	Macis (4 oz.)
Sem. Cardamom. (1½ lb.)	

All 27 ingredients were then distilled in Spts. Vini Rect. (q.s.) and finally digested for an unspecified time period. The patent did not give additional details for the preparation of Turlington's Balsam, but it would have been routine to decant or filter the preparation to get a clear fluid for bottling.

Each ingredient of Turlington's Balsam of Life will now be considered in more detail. The ingredients are listed, followed in parentheses by synonyms or alternative names, the Latin names for the genus and species, and Turlington's antiquated spelling of some of the

ingredients. Each ingredient is followed by a discussion of the accepted medical usage in the 18th and early 19th centuries. The medical interpretation is based on several early sources, including Tennent's 1734 edition of *Every Man His Own Doctor: Or the Poor Planter's Physician*. Please note that the following discussion should not be construed as an endorsement for Turlington's patent medicine or its ingredients. It should also be emphasized that some of the components of Turlington's patent medicine are now understood to have toxic side effects, especially at higher dosages.

Description of Ingredients Listed in Turlington's Patent

Gum Arabic (*Acacia senegal* or *Acacia verek*, "Araback")

Gum arabic was used as a demulcent (lubricant) and painkiller in the treatment of catarrh (mucus congestion), respiratory problems, diarrhea, dysentery, and difficulty in urination (Thacher and Currie 1810: 158; Estes 1990: 17).

Oleum (Oil, "Oyle")

There were numerous kinds of oleum, or oil, in the *materia medica* of Turlington's time. The term, oleum, by itself was used to refer to oil distilled from the flowers of the Seville orange tree (Duncan and Lewis 1806: 221). This oil was described as somewhat bitter compared to the sweeter oil obtained from oranges from China. Oleum provided one of the flavoring agents in Turlington's Balsam of Life. In addition, it may be noted that Tennent (1734: 47) suggested that an "oyle" and cider drink could be used for suppression of urination in some situations.

Saint John's Wort (*Hypericum perforatum*, Herb. Hyperici)

In the *Edinburgh New Dispensatory* (Duncan and Lewis 1806: 261–265) this plant is mentioned, but its medical uses were not discussed. However, in the 1794 edition, it was reported that the flowers of Saint-John's-wort served as a tonic, diuretic (induced urination), vulnerary (wound healer), antihysterical, and antihelminthic (dewormer) (Estes 1990: 100–101).



A.D. 1744 N° 596.

Medicinal Compound.

TURLINGTON'S SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, ROBERT TURLINGTON, of London, Merchant, send greeting.

WHEREAS His most Excellent Majesty King George the Second, by His Letters Patent under the Great Seal of Great Britain, bearing date the
5 Eighteenth day of January, in the seventeenth year of His reign, did give and grant unto me, the said Robert Turlington, His especial licence that I, during the term of years therein expressed, should and lawfully might use, exercise, and vend my new Invention of "A SPECIFICK BALSAM, CALLED THE BALSAM OF LIFE," within that part of Great Britain called England,
10 Dominion of Wales, and Town of Berwick-upon-Tweed; in which said Letters Patent there is contained a proviso obliging me, the said Robert Turlington, by writing under my hand and seal, to cause a particular description of the nature of my said Invention, and in what manner the same is to be performed, to be inrolled in His Majesty's High Court of Chancery within four calendar
15 months after the date of the said recited Letters Patent, as in and by the same, relation being thereunto had, may more at large appear.

NOW KNOW YE, that in compliance with the said recited proviso, I, the said Robert Turlington, do hereby declare that the nature of my said Invention of the said Specifick Balsam, called the Balsam of Life, doth
20 consist and is to be performed in the manner herein-after mentioned (that is to say):—

Take of storax five pounds, coriander seeds one pound, aloes two pounds and half, fennell one pound, mastick one pound and half, cardamums one pound and half, frankinsence one pound and half, anniseeds one pound,

Figure 16. A 19th-century printed version of Turlington's patent (Patent Office 1856).

Turlington's Medicinal Compound.

benjamin five pounds, angilica one pound, gum elemy seven pounds, cinnamon two pounds, guaiacum three pounds, cloves one pound, myrrh six pounds, nutmeggs eight ounces, arabaek eight pounds, winter bark one pound, perne balsam five pounds, nettle seeds one pound and half, tolué one pound, juniper one pound, safron one pound, mace four ounces, oyle eight pounds, Saint John 5
wort eight pounds, marsh mallows four pounds. Distill and digest the same with a quantity sufficient of rectified spirits in a glass vehicle, untill the same become a balsam, on a sand heat or slow fire, which said balsam is to be taken in any liquid, thirty or forty drops at a time, according to the nature of the patient's disorder, and to be repeated as often as occasion requires, which will 10
cure the stone, gravel, cholick, and inward weakness.

In witness whereof, I, the said Robert Turlington, have hereunto sett my hand and seal, this Tenth day of May. One thousand seven hundred and forty-four, in the seventeenth year of the reign of King George the 15
Second.

ROBERT TURLINGTON.

AND BE IT REMEMBERED, that on the Eleventh day of May above written, the before-named Robert Turlington came before our Lord the King in His Chancery, and acknowledged the above Writing, and all and every thing therein contained and specified, in form above said. And also the said 20
Writing was stamped according to the form of the Statute made and provided in the sixth year of the reign of King William and Queen Mary, and so forth.

Inrolled the Twelfth day of May. in the seventeenth year of King George the Second within written. 25

LONDON :

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1856.

Figure 16 continued. A 19th-century printed version of Turlington's patent (Patent Office 1856).

Gum Elemi ("Gum Elemy")

Gum elemi was a resin obtained from several different trees, such as *Cannarium commune*, *Icaca icicariba*, and *Elaphrium elemifera*. It was used internally as a stimulant and tonic, and externally as a plaster and ointment (Estes 1990: 75).

Myrrh (*Commiphora abyssinnica*)

The ancient medication, myrrh, like guaiac (discussed below), was considered a heating

and stimulating medicine that led to diaphoresis or sweating. Such drugs would be expected to reduce fever. In addition, it was viewed as an expectorant, a stomach medicine, a stimulant of menstrual discharge, and an antiseptic (Estes 1990: 134). Myrrh was used to increase secretion of body fluids, such as phlegm (Duncan and Lewis 1806: 295). Thacher and Currie (1810: 163–164) concurred, adding that it was also applicable to the treatment of pulmonary congestion, smallpox, and asthma.

Gum Benzoin (Gum of Benjamin Tree, *Styrax Benzoin*)

Duncan and Lewis (1806: 614) described a tincture of benzoin that included two other ingredients of Turlington's Balsam, namely balsam of tolu and socotrina aloes. Thacher and Currie (1810) added that a tincture of benzoin had been used as an expectorant for treating asthma. The tincture also contained Peruvian balsam and aloes, two ingredients of the original Turlington's Balsam of Life. Tincture of benzoin was known by a variety of different names: Ward's Balsam, Friar's Balsam, Jesuits' Drops, Turlington's Drops, etc. (Wootton 1972: 135). The tincture was given for stomach complaints and, externally, for relief of surface pains and skin damage, but was used more commonly during the 18th century than later (Thacher and Currie 1810: 215, 337).

Storax (*Styrax officinalis* or *Styrax calamita* or *Liquidambar orientalis*)

This is a balsam that yields benzoic acid on distillation (Duncan and Lewis 1806: 348–349). Thacher and Currie (1810: 215) added that storax resembles benzoin in its properties and had been used as an expectorant in treating asthma. By 1810, it was no longer considered a useful drug.

Balsam Peruv. (*Myroxylon pereirae*, Balsam of Peru)

Balsam of Peru was described as a warm, aromatic medicine of use, internally, in the treatment of gonorrhoea and dysentery, and, externally, for healing wounds, sores, and tetanus (Thacher and Currie 1810: 163). It was considered a tonic, expectorant, facilitator of menstrual flow, and wound healer (Estes 1990: 150).

Herb. Althae (*Althaea officinalis*, Marshmallow, Marsh Mallow)

The herb marshmallow was used as an emollient (to relieve irritation) and demulcent (also to relieve irritation, usually referring to mucous membranes) "in diseases attended with irritation and pain as in various pulmonary complaints and in affections of the alimentary canal and urinary organs" (Duncan and Lewis 1806: 147–148). Tennent (1734: 11, 14, 18, 46, 48) employed this herb in treating a wide range of diseases and symptoms. These

included purging to relieve fever, headaches, pain in the breast, and occasionally pain or inflammation of the eye, and for treating quinsy or sore throat, stomachaches, stones, and piles. To this long list, Thacher and Currie (1810: 76) added the use of Herb. Althae for curing asthma, dysentery, and pain from teething.

Gum. Guaic. (*Guaicum officinale* or *Guaicum sanctum*, Gum Guaiacum, Guaiac)

Guaic was known as a diaphoretic (a substance that warms the body and causes sweating). It was also known as a diuretic and, in large doses, as a purgative. It was considered useful in the treatment of rheumatism, gout, venereal disease, and skin diseases, such as eczema (Duncan and Lewis 1806: 256–257; Thacher and Currie 1810: 129). Thacher and Currie added that guaiac was also used to counteract the toxic side effects of calomel, a frequently used 18th- and 19th-century mercurial drug.

Aloes Socot. (*Aloe socotorina*)

Aloe socotorina is a gum resin obtained from Socotora, an island in the Indian Ocean. There are various species of aloes, but the Socotrine aloes were considered the purest and most desirable for medical use. Aloes was used as a stimulating purgative, especially for treating constipation, as well as to maintain or restore normal menstruation. An alcoholic solution was used externally to reduce bleeding and to help heal wounds (Thacher and Currie 1810: 75). Because of its purgative nature, aloes were also given to expel parasitic worms (Estes 1990: 6). It is notable that aloes were sometimes used in concert with other components of Turlington's Balsam of Life, such as gum guaiacum, myrrh, and benzoin (Duncan and Lewis 1806: 146). For example, Thacher and Currie (1810: 336) described an alcoholic solution containing aloes, myrrh, and saffron that they considered an improvement of the "Elixir Proprietatis of Paracelsus."

Cort. Cinnam. (Cortex or Bark of *Cinnamomum zeylanicum*)

Cinnamon was described as a "very elegant and useful aromatic" with stimulating, heating, stomachic, carminative, and tonic properties (Duncan and Lewis 1806: 271–273). In addition, cinnamon served as an adjunct to

other drugs to mask their bad tastes. The properties ascribed to this plant led to its medical use in the treatment of stomach cramps, fainting, and to relieve pain from a toothache (Thacher and Currie 1810: 141–142).

Frankincense (Gum Oliban, Olibanum)

Frankincense was used because of its properties as a diaphoretic and cathartic (Estes 1990: 141).

Sem. Cardamom. (*Elettaria cardamomum*, Semen or Seeds of Cardamom, “Cardamums,” Amomum)

The variety of cardamom used by Turlington was probably the one grown in the East Indies. The seeds were described as a “warm, grateful, pungent aromatic,” providing an effective relief for gas. In addition, cardamom seeds were used to prepare a diaphoretic agent (Estes 1990: 39). Cardamom was sometimes used in conjunction with other ingredients of Turlington’s Balsam of Life, such as aloes and cinnamon. The *New Edinburgh Dispensatory* of 1806 noted that this drug was more effective in alcohol than in a water preparation (Duncan and Lewis 1806: 151).

Sem. Urticae (*Urtica dioica*, Semen or Seeds of Urticae, Nettle Seeds)

Externally, nettle was used for pain relief (Thacher and Currie 1810: 225) and was thought to offer occasional success in counteracting paralysis of limbs. Nettle was also applied to the treatment of fevers and malaria. The leaves of the nettle plant were used to reduce fevers and to remove stones from the urinary tract (Estes 1990: 200).

Gum Mastich (*Pistacia lentiscus*, Gum of Mastiche or Mastic, “Mastick”)

This herb, native to southern Europe and North Africa, when “combined with a little essential oil, it is principally used by the Turkish women as a masticatory to preserve the teeth and give a pleasant smell to the breath” (Duncan and Lewis 1806: 316–320). Gum mastich, the resin from the *Pistacia lentiscus* tree, was used as a tonic and astringent.

Balsam Tolu (*Myrospermum toluiferum*, “Tolue”)

This drug was described as medically similar to other balsams (Duncan and Lewis 1806:

358). It was combined in some remedies with a tincture of benzoin. Thacher and Currie (1810: 222) considered balsam of tolu to be the mildest of all the balsams and also of use as an expectorant. It was one of the most fragrant balsams, used mainly as a flavorant.

Rad. Angelicae (*Angelica archangelica*, “Angilica,” Root of Angelica)

Angelica roots provided another aromatic carminative and mild laxative (Duncan and Lewis 1806: 156; Estes 1990: 11).

Sem. Coriand. (*Coriandrum sativum*, Semen or Seeds of Coriander)

The seeds of coriander served as an aromatic and carminative (Estes 1990: 54).

Sem. Faenic Dulc. (Semen or Seeds of *Foeniculum dulce*, Sweet Fennel, “Fennell”)

This component was described as having a most agreeable flavor. It was used to provide a sweet taste to medicinal preparations (Duncan and Lewis 1806: 155). Fennel was often combined with anise (discussed below), another flavorant. In addition, this spice served as a carminative, expectorant, diuretic, and stimulator of milk production (Estes 1990: 84).

Sem. Anisi (*Pimpinella anisum*, Semen or Seeds of Anise, “Aniseeds”)

Aqueous preparations of anise seeds were considered ineffective; solutions with rectified (refined) alcohol were used to extract a flavorant, as in Turlington’s patent medicine. Flavorants in Turlington’s time, as in the present, helped mask unpleasant tastes of other ingredients (Duncan and Lewis 1806: 310). It should also be noted that preparations made with anise seeds were used for treating pulmonary disorders, facilitating production of milk in nursing mothers, and providing relief from gas and indigestion (Estes 1990: 11).

Cort. Winteran. (Cortex or Bark of *Drimys winteri*, Winter’s Bark)

The plant derives its name from its discoverer, Captain Winter, who served with Sir Francis Drake. Winter discovered the plant in 1567 on the Coast of Magellan at the

southern tip of South America. The bark was used as a spice and to prevent scurvy (Estes 1990: 210). In the *Edinburgh New Dispensatory*, the authors stated that the bark was used in "diet drinks" (Duncan and Lewis 1806: 365). Diet drinks in Turlington's time were medicinal mixtures used for treating venereal disease (Porter 2003: 87).

Caryophyllae (*Caryophyllus aromaticus*, Cloves, *Eugenia*)

Cloves were recognized as excellent "aromatics," useful for treating flatulence or gas (Duncan and Lewis 1806: 246–250), but they were primarily employed as adjuvants to other medicines (Thacher and Currie 1810: 123).

Crocus sativ. (*Crocus sativus*, Saffron, "Safron")

Like cloves, crocus was used as "an elegant aromatic" to counteract flatulence (Duncan and Lewis 1806: 232–234). It also provided a pleasant intoxicating effect and was considered useful in treating "hysterical depressions or obstructions of the uterine secretions." Thacher and Currie (1810: 115–116) stated that a high dose of saffron induces "immoderate mirth and all the consequences resulting from the abuses of spirituous liquors." By 1806, the perception of the medical value of saffron by doctors was on the decline. It may be noted that officinal (preferred by influential physicians) preparations of crocus were often combined with aloe and myrrh, as in Turlington's Balsam.

Gum Juniper (*Juniperus communis*, Olibanum)

The gum of this tree was originally collected in Arabia, transported from Mecca to Cairo, and then imported into Europe. The gum elicits an agreeable aroma (Duncan and Lewis 1806: 267). Juniper berries and tops found uses as a carminative, diuretic, and stimulant of menstrual flow (Estes 1990: 108).

Nuces. Moschat. (*Myristica fragrans*, Nutmeg, "Nuttmegs")

Nutmeg was prepared from the seeds of *Myristica fragrans*. By the 19th century, nutmeg was considered more as an aromatic spice or flavorant than as an active drug (Duncan and Lewis 1806: 292–294). Earlier, and closer to Turlington's time, Tennent (1734: 44) referred to the use of nutmeg as an ingredient in the

treatment of fever, headache, pain in the breast area, pain or inflammation of the eye, and suppressed menstruation. In addition, nutmeg had a reputation as a narcotic, mild laxative, anti-nausea drug, and astringent (Estes 1990: 138).

Macis (Mace, *Myristica fragrans*)

Macis, or mace, was prepared from the dried outer layer of the seed coat of *Myristica fragrans* and, thus, was almost identical to nutmeg. Both spices have similar properties, although mace is not as potent as nutmeg (Duncan and Lewis 1806: 292–294; Estes 1990: 138).

Spts. Vini Rect. (Rectified Spirit of Wine, Alcohol)

Rectified spirit of wine was made by distilling wine to obtain an alcoholic solution with a specific gravity of 0.835. Alcohol in old patent and proprietary medicines served several important functions and was considered to contribute a medical advantage to the formula. It was needed to extract the active principles from natural products, to maintain the drugs in a solution, and to protect the drugs from microbial breakdown, although Turlington and his contemporaries could not have known the microbiology and biochemistry involved. If Turlington's Balsam were used as directed, it would have had negligible intoxicating effects. However, it was often added to a glass of wine or usquebaugh. Alcohol was considered a stimulant, a means to stem bleeding when applied externally, and also it was understood to lessen pain through its action on the nervous system. Medical authorities cautioned against giving the patient large amounts of alcohol, but advised that alcoholic medications "act as a cordial and tonic. Vinous spirits, therefore, in small doses and properly diluted may be applied to useful purposes in the cure of diseases" (Duncan and Lewis 1806: 137–140).

After examining the ingredients of Turlington's Balsam of Life, several generalizations can be made. Why did Robert Turlington include so many ingredients in his formula? Clearly, it would have been more economical for Turlington to market a simpler mixture with fewer components. While his precise motivation for blending so many ingredients

cannot be known, some possibilities can be suggested. First, considering Turlington's great concern with competitors imitating his medicine, he may have felt that a complex medicine might discourage imitators. A second possible rationale for the polypharmacy common to early patent medicines was offered by Porter (2001: 121). He noted that physicians examined their patients directly, diagnosed them as having one or very few illnesses to treat and, thus, were able to prescribe a relatively simple medication. However, vendors of nostrums often did not actually see their customers. They were likely to target their medicines for numerous disorders, thus necessitating multiple ingredients. It is important to recognize that the numerous ingredients present in early proprietary medicines were each likely to be viewed as cures for several, or even numerous, illnesses. To take just one example of an ingredient of Turlington's patent, consider this discussion of myrrh:

In its medicinal effects, this aromatic bitter ... is supposed to warm and strengthen the stomach and other viscera; it frequently occasions mild diaphoresis, and in general, promotes the fluid secretions. Hence it has been used with advantage in cases of debility; in diseases arising from suppression of the urine, or from immoderate discharges, in cachectic habits, and those persons whose lungs and throat are oppressed by viscid phlegm. (Thacher and Currie 1810: 163-164)

Thacher and Currie added that myrrh could also provide relief from malignant, putrid, and pestilential fevers, smallpox, and spongy gums. All of these medical benefits of myrrh were listed in just one reference. It is certain that other influential physicians of the 18th and 19th centuries added still more medical applications for myrrh.

Finally, at first reading, Turlington's formula may sound like a preparation designed by a gourmet cook. Its ingredients include numerous spices—cardamom, cinnamon, fennel, anise, cloves, saffron, nutmeg, and mace. In Turlington's time, these spices, or aromatics, as they were called, had some medical use, but were primarily intended as flavorants, masking an unpleasant medicinal taste. If an improved taste was Turlington's rationale for including so many spices in his balsam formula, the functional redundancy came at a price, especially since most of the

spices were imported from distant countries. Clearly, a single spice could have provided an agreeable taste to Turlington's Balsam. By using a medley of spices, Turlington may have intended to create a complex taste, difficult to imitate.

Advertised Claims for Turlington's Balsam vs. Its Ingredients

The claims of cures made by Turlington evolved quickly, from relatively modest ones in the original patent of 1744 to something resembling a panacea. The patent stated simply that Turlington's medicinal compound "will cure the stone, gravel, cholick, and inward weakness." These claims were advertised in several ways, including testimonials and newspaper ads. Table 3 summarizes some of the maladies for which cures were advertised. In column 1, diseases cited more frequently in advertisements are nearer the top. Ingredients believed to be relevant to the cures for these maladies are given in column 2, and the pharmacological properties relevant to the cures are in column 3. Since this table is an important aspect of this paper, appropriate references on 18th- and 19th-century medical practice were relied on to consider the rationale behind the advertised cures for Turlington's Balsam of Life. These references included Tennent (1734), Duncan and Lewis (1806), and Thacher and Currie (1810), all accepted medical authorities of their time. Although the last two were published in the early 19th century, the authors were highly influenced by 18th-century literature. Estes' book (1990) provided an important and scholarly review of medical practices and philosophies of the 18th and early 19th centuries.

Maladies listed in Table 3 begin with stones and gravel. Both of these refer to essentially the same medical problem involving kidney, gall-, or bladder stones of different sizes, gravel being small stones. In either case, the clinical approach to treating stones in the 18th and 19th centuries was to flush the particles out of the urinary system using one or more diuretics. Turlington's formula provided numerous diuretic components. Similarly, the treatment for colic or abdominal pain in Turlington's day would have entailed purging the patient with cathartics, and, once again,

Turlington's Balsam was stacked with appropriate herbs.

Advertisements for Turlington's Balsam often referred to respiratory diseases, another major medical concern in the 18th and later centuries. As viewed in Turlington's time, once again, the balsam contained appropriate ingredients, expectorants to reduce coughing, and diaphoretics to reduce fever. In particular, the diaphoretic ingredients would have induced sweating and subsequently a cooling of the body, much like aspirin and related drugs of today operate. Moreover, gum arabic, anise seeds, and myrrh were considered good drugs for relieving nasal and throat congestion, often associated with colds.

Painkillers in the formula included gum guaiac, specifically used to treat rheumatism and, sometimes, gout. Turlington's patent listed several other painkillers to relieve joint pain. In addition, the astringents would have provided some relief from external cuts, bruises, etc., by helping to stop bleeding. The painkillers (anodynes) in Turlington's Balsam were generic in the sense that they were the desired "cure" for many medical problems in the 18th and 19th centuries, a time with limited knowledge of the actual etiology of most diseases. For example, two of the Balsam of Life components, marshmallow and nutmeg, were medically used for treating pain stemming from heart disease. An important side effect of heart disease is edema, an accumulation of fluid in cellular tissue. Diuretics reduced fluid buildup. Finally, Table 3 lists the seemingly miraculous cures of paralysis and lameness. Surprisingly, one of the balsam ingredients, nettle seeds, was believed to cure, occasionally, what was described as paralysis of the limbs (Thacher and Currie 1810: 225).

Table 3 discusses only a sampling of the many diseases that Turlington's Balsam was advertised to cure. A complete list of cures reported in the Bill of Directions, the free books, and newspaper advertisements reads like an encyclopedia of illness. The claims of cures for Turlington's Balsam that have not already been mentioned included hoarseness, jaundice, nausea, dizziness, flatulence, yellow fever, convulsions, toothaches, worms, tuberculosis, burns, skin ulcers, skin disease, and even distemper in cows. If one considers both

the large number of ingredients of Turlington's Balsam and the numerous medical uses reported in the medical literature of the time for each ingredient, manufacturers of patent medicines, like Robert Turlington, may well have been convinced that their concoctions were close to cure-alls.

Lest the reader feel an urge to rush to the nearest pharmacy and demand Turlington's Balsam of Life, consider the following. In a world before the disciplines of microbiology, synthetic organic chemistry, biochemistry, etc., had developed, medical knowledge about drug action was largely empirical and derived from anecdotal evidence. Drugs were given to patients with diseases or symptoms, and, if the patient improved, it was assumed that the drug was the reason. This logic is seriously flawed for at least three reasons. First, most diseases are not fatal and people get better in time, with or without treatment, so a seemingly successful cure may have had nothing to do with the drug provided. Secondly, the symptoms of a disease may have been relieved without actually curing the disease. Finally, symptoms of disease may have been alleviated by a placebo effect. Contemporary medical research utilizes cell and animal research and double-blind clinical trials to correct for these complications. However, Turlington and other manufacturers of medicines can only be judged by the available knowledge of their time.

The Question of Quackery

In Turlington's lifetime, and in the 19th century, there was much competition and infighting between and within the different groups that marketed proprietary medicines. Accusations of quackery and charlatanism were common. Many 18th- and 19th-century proprietary medicines were, and still are, considered by some to be "quack" medicines. Quackery is too complex to discuss here in depth, but the following references offer important insights: American Medical Association (1912), Young (1961), and Porter (2001). Porter (2001: 15–30) made a noble effort to define "quackery" and essentially concluded that the term has been used frequently, and rather loosely, and is easier to recognize than define. Some characteristics of medicines that suggest quackery would be secret remedies of limited or even negative medical value made

Table 3. Advertised cures for Turlington's Balsam of Life and relevant ingredients and properties

Disease or symptom	Relevant ingredients	Relevant property of ingredients
Stones and gravel	Gum arabic, gum guaiacum, St.-John's-wort, nettle seeds, fennel, saffron	Diuretics
Colic and GI problems	Myrrh, gum benzoin, marshmallow, aloes, frankincense	Cathartics
Respiratory diseases	Storax, marshmallow, balsam of tolu, fennel	Expectorants
Rheumatism and gout	Gum guaiac, saffron, gum arabic, marshmallow	Painkillers (anodynes)
Cuts, sores, and bruises	Gum elemi, myrrh, balsam of Peru, aloes, alcohol	Astringents
Possible heart disease	Gum arabic, gum guaiacum, St.-John's-wort, nettle seeds, fennel, saffron	Diuretics
Fever	Myrrh, guaiac, balsam of tolu, cardamom	Diaphoretics
Paralysis	Nutmeg	Mild narcotic

by people with questionable credentials and advertised very heavily with exaggerated claims. One or more of these characteristics were probably present in almost all proprietary medicines of Turlington's time, including those offered by highly educated physicians.

While Turlington and his successors insisted that no one else had the formula for Balsam of Life, it was not really a secret remedy, because the ingredients and its preparation were given in his patent. As quoted above, in 1767 Thomas Jackson & Son claimed to have gotten an official copy of the patent, on stamped paper, from the clerk of the rolls. Turlington's Balsam contained ingredients highly regarded by professional doctors and apothecaries. On the other hand, Turlington trained as a weaver and, in spite of being called "Dr. Turlington" by some, he probably had limited or no formal medical education. His medicine was certainly advertised widely, and his claims are now regarded as exaggerated. Turlington does not fit neatly in the stereotype of "quack." A final difficulty with the term quackery is that the contents of most proprietary medicines of the 18th century are not known; it is not known whether their ingredients were helpful, ineffective, or harmful. Most proprietary medicines of the distant past have not been studied in depth, taking into account the contemporary medical and pharmaceutical literature. In balance, it is certainly true that some proprietary medicine vendors made

fraudulent claims, selling medicines that were harmful, even when judged by the knowledge of their time, as noted by Young (1961), the American Medical Association (1912), and many others.

Turlington's Balsam in the Nineteenth and Early Twentieth Centuries

Turlington, his heirs, and successors marketed Balsam of Life for more than a half century. In contemplating Turlington's medicine, it is important to recognize that the 27 ingredients and their concentrations were not etched in stone. There were powerful forces leading a manufacturer of a long-lived preparation like Turlington's Balsam to tinker with his or her formula. These included (1) advances in medical knowledge; (2) changing costs and availability of ingredients; and (3) federal and local regulations that became stricter over time. For example, in the case of Lydia Pinkham's Vegetable Compound, the formula was changed at least four times between 1875 and 1994 (Tyler 1995: 24–28; Vegotsky and Elliott 2004: 23–24).

During the early years that Balsam of Life was sold, there were many imitators using the Turlington name and even his packaging. Newspaper advertisements placed by Turlington and his heirs frequently warned the public to avoid these "spurious compositions." It is impossible to know what vendors of Balsam of

Life were actually putting in the Turlington bottles. Eventually, official formulas were chosen and published. One significant modification of Turlington's Balsam was suggested by the highly regarded Philadelphia College of Pharmacy. In its very early years, the college undertook a reevaluation of eight English patent medicines, including Turlington's Balsam of Life (*Journal of the Philadelphia College of Pharmacy* 1834). In a sense, the focus on these proprietary medicines was a form of flattery. The Philadelphia College of Pharmacy, however, described this project as an attempt to apply up-to-date standards to several very popular nostrums. They rationalized the need for this study based on concerns with the efficacy of the original formulas, the manufacturers' tendency to include excessive and redundant ingredients, lack of consistency in the formulas being made, and misleading and exaggerated claims of the marketers. The committee, composed of Daniel B. Smith, Solomon Temple, and Samuel Jackson, offered a considerably revised version of Turlington's Balsam, as shown in Table 4.

The most obvious difference between the original patent formula and the revised one in Table 4 is the dramatic decrease in the number of components from the original 27 to 8 (not counting the alcohol as an ingredient). This improved formulation must have been very welcome to pharmacists who wished to sell their own versions of Turlington's Balsam at a competitive price. Notably absent were the numerous spices of the original patent formula, replaced by an extract of licorice. Redundancy was not completely eliminated, as the new formula included benzoin and

liquid styrax, both sources of benzoic acid. The Philadelphia College of Pharmacy version of Turlington's remedy took advantage of new perspectives on pharmacy and medicine, not surprising so many years after Turlington's original formulation.

After the unofficial endorsement of Turlington's Balsam by Smith, Temple, and Jackson, versions of Turlington's remedy continued to be offered well into the 20th century. A search for Turlington's Balsam in the index of the 1865 *Dispensatory of the United States of America* directs the reader to "Compound Tincture of Benzoin" (Wood and Bache 1865: 1387). This was another minimalist version of Turlington's formula, consisting simply of an alcoholic preparation of benzoin, aloes, storax, and balsam of tolu. In the sixth edition of the *Merck Index* (Merck & Co. 1952: 983), a citation for Turlington's Balsam directs the reader to "Balsam Traumatic" on page 114, providing a formula somewhat similar to the one in Table 4. In the 20th century, it was advertised for external purposes, rather than for internal use. Compound tincture of benzoin continues to be described in 20th-century U.S. pharmacopoeias.

In closing, it is important to summarize the significance of this review for historical archaeologists. Turlington's Balsam, with its numerous ingredients, has been found to be consistent with accepted medical usage in Turlington's time, and would have been considered appropriate for treating many of the disorders claimed in Turlington's advertising. Polypharmaceutical patent and proprietary medicines, like Turlington's Balsam, were intended to treat many diseases that reflected the medical concerns of their consumers. Not all commercial patent and proprietary medicines of the 18th and 19th centuries were intended to be panaceas; some were targeted against respiratory diseases, stomach distress, skin problems, venereal diseases, etc. When an archaeologist examines a medicine bottle with known contents and period of use, then clues to the medical use or uses can be derived from careful study of the advertising and the medical literature of the period. When interpreting a patent or proprietary medicine at a site, the date range in which the artifact was deposited needs to be considered. For example, dating from about the 1770s to 1820, empty Turlington bottles

Table 4. Turlington's Balsam of Life revised version

Ingredient	Quantity
Alcohol	8 pt.
Benzoin	12 oz.
Styrax, liquid	4 oz.
Socotrine aloes	1 oz.
Peruvian balsam	2 oz.
Myrrh	1 oz.
Angelica root	0.5 oz.
Balsam of tolu	4 oz.

were exported from England, but filled in North America. Over time, the formulas of medicines marketed for many years were likely to have changed, as did the advertised claims for those medicines. As noted above, there were a number of different formulas described as Turlington's Balsam. Patent and proprietary medicines found at sites need to be considered individually, rather than making a generalization, often negative, about their effectiveness. Many reflected the state of the art of medicine at the time of manufacturing. It cannot be assumed that all old patent and proprietary medicines were useless or harmful when judged by medical standards of their time.

Turlington's Balsam of Life

Turlington and his successors worked in turbulent times. From the 1740s until Hilton Wray's bankruptcy in 1804 there was the Scottish rebellion of 1745–1746, when Scottish troops came within 100 mi. of London; the War of Austrian Succession (1742–1748); the Seven Year's War (1756–1763); the American Revolutionary War (1776–1782); and post-revolutionary wars with France, starting in the 1790s. All had the potential to disrupt or destroy trade. The *Antigallican* affair attests to both the potential for enormous profits and catastrophic losses during wartime.

Turlington's decision to extend his business to the West Indies and the North American colonies expanded his markets and laid the base for the longevity of his Balsam of Life. Overseas markets, while lucrative, also brought additional risks, including shipwrecks, long intervals between exchange of letters and news; expenditures that took several years before the costs could be recouped; and complex and interlocked credit, where one bankruptcy could lead to others, in a domino effect. During wartime all overseas trade was threatened by disrupted supply chains, losses at sea, captured ships, and shifting alliances.

Death was ever present for the Turlington/Wray family. Several principal breadwinners died, leaving their spouses and other family members to deal with the consequences. Joseph Turlington's death left Jane with infant daughter Mary, 13-year-old Robert, and three brothers in between. Turlington's parents lost at least three young children. William Wray

died after only six years of marriage to Martha, and their only child, Martha, died when she was two. Both William Wray and John Wray died very shortly after they took over the medicine business, leaving Martha Wray and Mary Sopp to cope with the responsibilities.

Davis described the business climate of the second half of the 18th century:

So the majority of traders were simply more or less honest by the currently accepted standards of trading, and these gave them plenty of latitude for sharp practice. Society, under its veneer of cultured elegance, was violent, crude and very tough and trade reflected these rough social conditions. Although easy and tempting to enter, it was an unregulated jungle in which, in spite of some fat pickings, the penalty for failure was often disaster and the debtors' prison. (Davis 1966: 182)

Bankruptcy and debtors' prison always lurked in the background, as Turlington was all too aware and Hilton Wray was to experience.

The medicine business in 18th-century Britain was unregulated. Aside from published formularies, no central authority or authorities controlled diagnosis, preparation of medicines, treatments, or the practice of medicine. Consumers had a multitude of choices: published formularies, self-help books, and other publications; friends and neighbors; physicians, apothecaries, druggists, surgeons, doctors, bonesetters, tooth drawers, and herbalists; as well as services and products provided by persons with no medical background at all. A host of prepared proprietary medicines gave consumers options to self-diagnose, to make choices, and to treat themselves or others. The medicine business was open to anyone with business acumen, marketing skills, determination, and some luck. Battles for legitimacy were carried out through pamphlets, advertisements, books, and satisfied customers.

In principle, the patent provided protection for the Balsam of Life formula for 14 years; in reality, its authority proved difficult to enforce. There was no protection for proprietary packaging, such as signature, wrapper, or distinctive bottles. With no way to analyze the actual content of "spurious compositions," Turlington used packaging imitations as proof of patent infringement. Only an in-depth analysis of court of chancery cases from this period that involved patent medicines can

reveal whether the court viewed this relationship as relevant. To establish his medicine in the marketplace and protect his medicine from “spurious compositions” required Turlington’s constant vigilance. He used all the opportunities available to him: advertising, distribution networks, distinctive packaging, a coat of arms, a royal patent, free book, threats and warnings, offers of rewards for successful convictions, his handwritten signature, and the court of chancery. If imitation is an indication of success, Turlington achieved the latter.

In addition to money, Turlington’s success can be measured by the properties he rented/leased/owned, and where he lived. Born in Bethnal Green, a hamlet outside the city walls in London’s East End, he moved just east of the city walls when he worked as a weaver. Once he went into the medicine business he lived and worked inside the City itself, and after 12 years he was able to move to two substantial properties in Birchin Lane. Finally, he had a “Great House and garden” in Chelsea, west of London, joining other city merchants leaving their place of business for less-crowded surroundings (George 1925: 104–107). In his early years Bethnal Green was surrounded by stagnant pools and marshlands mixed in with market gardens. His parish

church, St. Dunstan and All Saints, was known as the “Church of the High Seas.” Its proximity to the London docks made it the official burial place for those lost at sea, strongly associating it with the navy, East India Company, and merchant ships (Cox and Chessun 2002: 12–15). Chelsea, with its market gardens and strip development, resembled his childhood surroundings, but was upstream from effluent dumped into the Thames from the city of London. Chelsea was not without its problems, however. In the 1750s and 1760s Chelsea’s roads and lanes were the haunt of thieves, footpads, and highwaymen, as were other London outskirts. Residents raised money by subscription to reward informers on the successful conviction of the felon.

It is clear from his well-formed signature on his indenture/Freedom of the City paper (FIG. 14a) that Turlington had had some formal education. In spite of his father’s death in 1710/11, Turlington was able to wait until age 17 to begin his apprenticeship, suggesting that the family had had some financial resources. His Chinese-export punchbowl, bearing his coat of arms, reflected both his commercial interests and his social connections and aspirations (FIG. 17). It is not difficult to imagine planners of the *Anitgallican* project sitting around a table, gradually emptying the bowl of its punch.



Figure 17. This Chinese-export punchbowl, bearing Turlington’s coat of arms, dates to the late 1740s. The bowl is large, with a rim diameter of 29 cm (11¼ in.). (Photo courtesy of Cohen and Cohen, London, 2015.)

During his life, Robert Turlington defended his medicine from imitators, a struggle fought less successfully by Martha Wray, Mary Sopp, and Hilton Wray. That Turlington's Balsam of Life survived into the 20th century can be credited not only to the very imitators and counterfeiters that Turlington battled so vigorously, but also to his satisfied customers. They have been responsible for his lasting legacy. Although vendors made many different versions of Balsam of Life, by using his Bill of Directions, his signature (forged or stamped), and his bottle, Turlington's Balsam of Life maintained its distinct identity. It was successfully sold in London, Bristol, Dublin, Antigua, Monserrat, Barbados, Williamsburg, Philadelphia, New

York, Quebec, Montreal, and a host of other places. It was a staple medicine in the Northwest fur trade in North America, used by explorers, fur traders, and Native Americans. It appeared in newspaper advertisements in Australia and will, no doubt, be found on East India Company sites in India. Perhaps in a home in Toronto in 1920 it stood on a shelf between a bottle of Perry Davis's Vegetable Painkiller and Dr. Thomas' Eclectic Oil. North American archaeologists are well acquainted with Turlington bottles. In 1934 a newspaper article describing archaeological excavations at Yorktown specifically mentioned both a stoneware Bellarmine jar and a Turlington's Balsam of Life bottle as among the interesting finds (Jermaine 1934: 6). The named medicine



Figure 18. Wheaton Glass made "reproductions" of Turlington's bottles in the early 1970s for the bottle-collector market. One is grass green, the other reddish purple, but other colors, such as red, were also made. All were machine-made. On one side is embossed: KING'S / PATENT / H / BALSAM / OF / LIFE / © / W71, on the other side is embossed: BALSAM / OF / LIFE; illegible marks are on base. These are much larger than original Turlington bottles, holding 5 oz. (150 ml), with a bottle height of 130 mm and base dimensions 32 × 52 mm. (Photo by O. Jones, 2014; Jones collection.)

was still included in the *Merck Index* as late as 1952 (Merck & Co. 1952). In 1971 the Wheaton Glass Company of New Jersey considered the bottle so iconic that they included it in their reproduction series of historic bottles for collectors (FIG. 18). In 2010 a copy of Turlington's book became available online. On 14 October 2011, an 18th-century "large" Turlington bottle sold on eBay for the astonishing sum of \$1,352.27. Turlington and Balsam of Life often appear in discussions of the patent-medicine business and the history of successful branding, because of the longevity of his successful packaging and its association with his name.

Acknowledgments

Olive Jones is deeply grateful to several people for their assistance and encouragement during the long process of researching and preparing this article. Their help has been invaluable. Jeremy Kemp shared his knowledge of 18th-century English patent medicines, providing measurements and photos of many interesting bottles and objects. Dan Cowman lent his copy of Turlington's book and provided electronic images of the wrapped Turlington bottle and other items. Peggy Smyth encouraged Jones to go to London, where she found valuable information at the Kensington and Chelsea Archives and at the London Metropolitan Archives. Ms. Smyth also cheerfully shared Jones's Turlington pilgrimage to Chelsea, Birchin Lane, St. Edmund the King and Martyr, St. Dunstan and All Saints, William and Martha Wray's headstone attached to the foundation of St. Leonard's Shoreditch, and a tour of Dennis Severs' House in Spitalfields. Phil Dunning provided encouragement and the compound tincture of benzoin. Michelle Casey prepared the illustrations in a digital format. Particular thanks go to Allen Vegotsky, who agreed to participate in this project and waited patiently for Jones to finish. He also introduced Jones to Newspaper Archive, <<http://www.newspaperarchive.com>>, opening up the invaluable research opportunities to be found in online databases.

Allen Vegotsky thanks Dan Cowman and Frank Sternad for comments and advice on the medical section of the paper. He also thanks New South Associates, Inc., for providing space, facilities, and encouragement for his archival research.

References

- Adair, James M.
[1787] *Essays on Fashionable Diseases: The Dangerous Effects of Hot and Crowded Rooms. The Cloathing of Invalids. Lady and Gentlemen Doctors. And on Quacks and Quackery.* Bateman, London.
- Adams's Weekly Currant*
1780 Turlington's Original Balsam of Life: Advertisement. *Adams's Weekly Currant* 18 January: 4. London. Newspaper Archive <<http://www.newspaperarchives.com>>. Accessed July 2014.
- Alpe, Edmund Nicholas
[1888] *Handy Book of Medicine Stamp Duty with the Statutes and Appendices.* Chemist and Druggist, London.
- American Medical Association
1912 *Nostrums and Quackery.* 2nd ed. American Medical Association Press, Chicago.
- Atlas, A General Newspaper and Journal of Literature*
1843 Thomas Butler: Advertisement. *Atlas, A General Newspaper and Journal of Literature* 4 March: 144. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- Baillie, Granville Hugh
1947 *Watchmakers and Clockmakers of the World.* 2nd ed. N.A.G. Press, London. Ancestry <<http://www.ancestry.com>>. Accessed 14 March 2011.
- Banks, Fay
2008 *250 Years of British Antique Wine Bottles: Sealed Wine Bottles, the Wine-Drinking Classes and Other Associated Bottles 1665–1915, Part 1.* Fay Banks, Oxford, UK.
- Beatson & Co.
1867 *Price List. Rotherham Glass Works, List of Flint and Green Glass Manufactured by Beatson & Co. for the Use of Chemists and Druggists.* Beatson & Co., Rotherham, UK.
- Bell's Weekly Messenger*
1822 Genuine Patent Medicines, Butler's: Advertisement. *Bell's Weekly Messenger* 24 March: 96. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- Bossche, Willy Van den
2001 *Antique Glass Bottles: Their History and Evolution (1500–1850): A Comprehensive, Illustrated Guide, With a World-Wide Bibliography of Glass Bottles.* Antique Collectors' Club, Woodbridge, UK.

- Brewer, William A.
1884 Reminiscences of an Old Pharmacist.—No. 6. *Pharmaceutical Record* 4(1August): 326–327.
- Brown, P. S.
1975 The Vendors of Medicines Advertised in Eighteenth-Century Bath Newspapers. *Medical History* 19(4): 352–369.
1976 Medicines Advertised in Eighteenth-Century Bath Newspapers. *Medical History* 20(2): 152–168.
- Buckley, Francis
1933 Old English Glass. Patent Medicine Bottles. *Glass* 10(6): 234–235.
1934 Old English Glass. A Famous London Glasshouse. *Glass* 11(8): 308, 311.
- Campbell, Robert
1747 *London Tradesman, Being a Compendious View of All the Trades, Professions, Arts ... Now Practised in the Cities of London and Westminster*. Google Books <<http://www.books.google.ca>>. Accessed 2011, 24 June 2014 Also: Reprinted 1969 by David & Charles, Newton Abbot, UK.
- Cary, John
1795 *Cary's New and Accurate Plan of London and Westminster*. John Cary, London. <<http://www.mapco.net/London>>. Accessed June 2014.
- Charleston, Robert J.
1984 *English Glass and the Glass Used in England, circa 400–1940*. George Allen and Unwin, London.
- Chemist and Druggist*
1905 From Past Times. *Chemist and Druggist* 23 September: 525.
- Cox, Jane, and Christopher Chessun
2002 *St. Dunstan and All Saints, Stepney*. Jarrold, Andover, Hampshire, UK.
- Craftsman; or Say's Weekly Journal*
1774 Marriages...Mr. John Alder, merchant: News item. *Craftsman; or Say's Weekly Journal* 29 January: 3. London, England. <<http://www.newspaperarchive.com>>. Accessed July 2014.
- Cranfield, Geoffrey Alan
1962 *The Development of the Provincial Newspaper 1700–1760*. Clarendon Press, Oxford, UK.
- Crellin John K., and John R. Scott
1972 Lionel Lockyer and His Pills. *Proceeding of the xxxiii International Congress of the History of Medicine* 2: 1182–1186. Wellcome Institute for the History of Medicine, London.
- Cumberland Glass Manufacturing Company
1919 *Illustrated Catalogue and Price List of Hand and Machine Bottles Ointment and Battery Jars, Catalogue J*. Cumberland Glass Manufacturing Company, Bridgeton, NJ.
- Curth, Louise Hill
2008 Medical Advertising in the Popular Press: Almanacs and the Growth of Proprietary Medicines. *Pharmacy in History* 50 (1): 3–16.
- Daily Advertiser*
1755 All Persons Indebted: Advertisement. *Daily Advertiser* 20 October: 2. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
1796 To be Sold: Advertisement. *Daily Advertiser* 28 September: 3. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- Daily Journal*
1730 Thomas Lake: Advertisement. *Daily Journal* 20 January: 2. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- Davis, Dorothy
1966 *A History of Shopping*. University of Toronto Press, Toronto.
- Doherty, Francis
1990 The Anodyne Necklace: A Quack Remedy and Its Promotion. *Medical History* 34(3): 268–293.
- Dominion Glass Company
[1913–1920] *Druggists' Glassware Catalogue No. 12*. Dominion Glass Company, Montreal, QC.
- Duncan, Andrew, and William Lewis
1806 *The Edinburgh New Dispensatory*. 3rd ed. Bell & Bradfute, Edinburgh, UK.
- Edinburgh Chronicle*
1760 Cluer Dicey, E. D. Ockell, & Company: Advertisement. *Edinburgh Chronicle* 5–7 January: 392. Edinburgh, UK. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- Estes, J. Worth
1990 *Dictionary of Protopharmacology: Therapeutic Practices, 1700–1850*. Science History, Canton, MA.
- Finlay, Michael
1990 *Western Writing Implements in the Age of the Quill Pen*. Plains, Wetheral, UK.

Fitzgerald, Percy, ed.

- 1876 *The Life, Letters and Writings of Charles Lamb*. Vol. 1. E. Moxon & Co., London. Google Books <<https://books.google.com/>>. Accessed 3 April 2016.

Flying-Post

- 1700 Stoughton's Elixir Stomachicum: Advertisement. *Flying-Post; or, the Post-Master* 30 April–2 May: 2. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.

Gale, Ryan R.

- 2009 *The Great Northwest Fur Trade: A Material Culture, 1763–1850*. Track of the Wolf, Elk River, MN.

Gazetteer and London Daily Advertiser

- 1756 Turlington's Balsam of Life: Advertisement. *Gazetteer and London Daily Advertiser* 24 January: 4. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1762a London...The paragraph in the papers of yesterday: News item. *Gazetteer and London Daily Advertiser* 23 September: 2. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1762b To the Printer: Letter concerning the Antigallican. *Gazetteer and London Daily Advertiser* 28 September: 1. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.

Gazetteer and New Daily Advertiser

- 1766a Turlington's Balsam of Life: Advertisement. *Gazetteer and New Daily Advertiser* 19 August: 4. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1766b Turlington's Balsam of Life: Advertisement. *Gazetteer and New Daily Advertiser* 5 December: 1. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1770 Antigallican Privateer: Advertisement. *Gazetteer and New Daily Advertiser* 25 September: 1. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.

General Advertiser

- 1744/45a Robert Turlington: Advertisement. *General Advertiser* 5 January: 2. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1744/45b John Newbery: Advertisement. *General Advertiser* 6 February: 4. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.

- 1748 London...Last Week a Patent, Turlington: News item. *General Advertiser* 19 November: 1. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.

- 1750/51 No title. *General Advertiser* 21 February: 1. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.

- 1751a Fryer's Balsam: Advertisement. *General Advertiser* 2 May: 4. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.

- 1751b No title. *General Advertiser* 10 May: 1. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.

General Evening Post (London)

- 1773a Turlington's Original Balsam of Life. John Wray: Advertisement. *General Evening Post (London)* 26–28 January: 3. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.

- 1773b Turlington's Original Balsam of Life: Advertisement. *General Evening Post (London)* 28–31 August: 3. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.

- 1774 Martha Wray and Hilton Wray: Advertisement. *General Evening Post (London)* 10–13 September: 2. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.

- 1775 London...House of Commons...At half after three, Mr. Sawbridge: News item. *General Evening Post (London)* 29 April: 3. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.

- 1790 Medicine Act, Newbery: Advertisement. *General Evening Post* (London) 23–25 March: 2. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.

George, Dorothy M.

- 1925 *London Life in the Eighteenth Century*. Reprinted 1965 by Penguin, London.

Griffenhagen, George B., and James Harvey Young

- 1959 Old English Patent Medicines in America. *Contributions from the Museum of History and Technology* 218(10): 156–183.

Hartmann, Franz

- 1887 *The Life of Philippus Theophrastus Bombast, of Hohenheim, Known by the Name of Paracelsus*. George Redway, London. Google Books <<https://books.google.com>>. Accessed 3 April 2016.

- Hawkes, Thomas, and George Hawkes
 1815 *Prices of Flint Glass for Exportation. Druggist Furniture. 1815.* Catalog, Robert Tannahill Research Library, Henry Ford Museum, Dearborn, MI.
- 1895 *Prices of Flint Glass, by Tho. and Geo. Hawkes, at Their Manufactory, Dudley, Worcestershire, 1794.* *Pottery Gazette and Glass Trades Review* 1 May, 1: 366–367.
- Haycock, David Boyd, and Patrick Wallis, eds.
 2005 *Quackery and Commerce in Seventeenth-Century London: The Proprietary Medicine Business of Anthony Daffy.* Wellcome Trust Centre for the History of Medicine at UCL, *Medical History*, Supplement No. 25. London.
- Heal, Ambrose
 1972 *The Signboards of Old London Shops: A Review of the Shop Signs Employed by the London Tradesmen during the XVIIth and XVIIIth Centuries.* Reprint of 1947 edition. Benjamin Blom, New York.
- House of Commons
 1768 *Report from the Committee of the House of Commons on the State of the Private Mad-houses of the Kingdom.* John Whiston, Benjamin White, Charles Bathurst, Lockyer Davis, Charles Reymers, and William Bowyer, London.
- Hughes, G. Bernard
 1968 *English Glass for the Collector 1660–1860.* Frederick A. Praeger, New York.
- Hyde, Ralph
 1981 *The A to Z of Georgian London.* Harry Margary and Guildhall Library, London.
- Innes, Harold
 1930 *Peter Pond: Fur Trader and Adventurer.* Irwin & Gordon, Toronto.
- James, Robert
 1747 *Pharmacopoeia Universalis: Or, a New Universal English Dispensatory.* J. Hodges and J. Wood, London. Google Books <https://books.google.com/books?id=MaI4AAAAAMAAJ&dq=Pharmacopoeia+Universalis:+Or,+a+New+Universal+English+Dispensatory&source=gbs_navlinks_s>. Accessed 3 April 2016.
- Jermame, W. W.
 1934 C.C.C. Workers Dig for Relics of Colonial Days at Yorktown. *Seattle Daily Times* 12 June: 6. GenealogyBank <<http://www.genealogybank.com/gbnk/newspapers>>. Accessed 8 September 2012.
- Jewson, Nicholas D.
 1974 *Medical Knowledge and the Patronage System in 18th Century England.* *Sociology* 8(3): 369–385.
- Jones, Olive R.
 1981 *Essence of Peppermint, a History of the Medicine and Its Bottle.* *Historical Archaeology* 15(2): 1–57.
- 2010 *English Black Glass Bottles, 1725–1850: Historical Terminology.* *Journal of Glass Studies* 52: 91–156.
- Journal of the Philadelphia College of Pharmacy*
 1834 Art. VI.—Patent Medicines. *Journal of the Philadelphia College of Pharmacy* 5(4): 20–31.
- King, Peter
 1830 *The Life of John Locke with Extracts from His Correspondence, Journals and Common-Place Books.* Vol. 1. Henry Colburn and Richard Bentley, London. Google Books <<https://books.google.ca/?hl=en>>. Accessed August 2010.
- King, Steven
 2006 *Accessing Drugs in the Eighteenth-Century Regions.* In *From Physick to Pharmacology: Five Hundred Years of British Drug Retailing*, ed. by Louise Curth, 49–78. Ashgate, Aldershot, UK.
- Kingston Gazette*
 1810a Lewis Lyman & Co.: Advertisement. *Kingston Gazette* 25 September: p. 2. Microfilm, Kingston, ON.
- 1810b Romeo Wadsworth: Advertisement. *Kingston Gazette* 25 September: p. 2. Microfilm, Kingston, ON.
- Laurens, Henry
 1970 *The Papers of Henry Laurens, Vol. Two: Nov. 1, 1755–Dec. 31, 1758*, ed. by Philip M. Hamer, George C. Rogers, Jr., and Peggy J. Wehage. South Carolina Historical Society, Columbia. Google Books <<https://books.google.ca/?hl=en>>. Accessed 24 June 2014.
- Lloyd's Evening-Post*
 1793 Dr. Steers's Opodeldoc: Advertisement. *Lloyd's Evening Post* 18–20 March: 269. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- Lloyd's Evening Post and British Chronicle*
 1758a No title. *Lloyd's Evening Post and British Chronicle* 10–13 February: 149–150. London, England. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.

- 1758b No title. *Lloyd's Evening Post and British Chronicle* 15–17 February: 164–165. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1763 No title. News announcement. *Lloyd's Evening Post and British Chronicle* 20–22 April: 382. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.

London Chronicle

- 1781a Bayley and Lowe, Kennedy's celebrated corn plaster: Advertisement. *London Chronicle* 2-4 January: 12. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1781b Mr. Spillsbury: Advertisement. *London Chronicle* 11–13 January: 47. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.

London Chronicle: Or Universal Evening Post

- 1762 London...Friday a Committee of proprietors: News item. *London Chronicle: Or Universal Evening Post* 27–30 March: 1. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.

London Courant

- 1747 Robert Turlington: Advertisement. *London Courant: Or, New Advertiser* 4 July 1747: 4. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.

London Daily Post, and General Advertiser

- 1743 Turlington's Balsam of Life: Advertisement. *London Daily Post, and General Advertiser* 13 October: 2. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.

London Evening-Post

- 1736 Bow Church-Yard: Advertisement. *London Evening-Post* 9–11 November: 3. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1746 Robert Turlington: Advertisement. *London Evening-Post* 17–19 April: 3. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1756 News. *London Evening-Post* 26–28 August: 4. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1757a News. *London Evening-Post* 19–22 February: 1. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1757b News. *London Evening-Post* 26 February–1 March: 1. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.

- 1757c London Letters. News announcement. *London Evening-Post* 1–4 October: 1–2. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1762 London. News. *London Evening-Post* 27–30 March: 1. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.

London Gazette

- 1737 Information List. *London Gazette* 27–30 August: 6–7. The Gazette, All Notices <<https://www.thegazette.co.uk>>. Accessed 13 July 2014.
- 1751 All Persons that Have ... Notice. *London Gazette* 19–22 October: 3. The Gazette, All Notices <<https://www.thegazette.co.uk>>. Accessed 13 July 2014.
- 1804 The Creditors ... Hilton Wray, of Birchin Lane. *London Gazette* 22–25 September: 1202. The Gazette, All Notices <<https://www.thegazette.co.uk>>. Accessed 13 July 2014.
- 1805 The Commissioners ... Hilton Wray, of Birchin Lane. *London Gazette* 16–19 March: 385. The Gazette, All Notices <<https://www.thegazette.co.uk>>. Accessed 13 July 2014.

London Gazetteer

- 1749 Robert Turlington: Advertisement. *London Gazetteer* 1 April: 4. Gale Cengage Learning <<http://find.galegroup.com>>. Accessed 11 April 2011.

London Journal

- 1732 Dr. Robert Eaton's Balsamick Styptick: Advertisement. *London Journal* 15 July: 4. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.

London Metropolitan Archives (LMA)

- 1673 Joseph Turlington, 18 March. St. Dunstan and All Saints, Register of Baptisms, London Metropolitan Archives, London. Ancestry <<http://www.ancestry.com>>. Accessed 4 March 2011.
- 1697 Robert Turlington, 13 June. St. Dunstan and All Saints, Register of Baptisms, London Metropolitan Archives, London. Ancestry <<http://www.ancestry.com>>. Accessed 4 March 2011.
- 1710 Mary Turlington, 12 November. St. Dunstan and All Saints, Register of Baptisms, London Metropolitan Archives, London. Ancestry <<http://www.ancestry.com>>. Accessed 15 March 2012.
- 1710/11 Joseph Thurlindine [Turlington], 14 January. St. Dunstan and All Saints, Register of Burials, London Metropolitan Archives, London. Ancestry <<http://www.ancestry.com>>. Accessed 14 March 2012.

- 1714/1721 Robert Turlington. City Freedom Admission Papers, 1681–1783, London Metropolitan Archives, London. Ancestry <<http://www.ancestry.com>>. Accessed 4 March 2011.
- 1725–1726 Bishopsgate Without Ward, Division 2, Land Tax Assessment Books. Ms. 11,316/78. Microfilm, London Metropolitan Archives, London.
- 1734 Mary Sopp, Baptism, 6 October. St. Dunstan in the East, Composite Register: Baptisms 1676–1766, Marriages 1676–1754, Burials 1676–1766, London Metropolitan Archives, London. Ancestry <<http://www.ancestry.com>>. Accessed 18 March 2011.
- 1736–1737 Bishopsgate Without Ward, Division 2, Land Tax Assessment Books, Ms. 11,316/111. Microfilm, London Metropolitan Archives, London.
- 1740–1741 Langbourne Ward, All Hallows Lombard Street Precinct, Land Tax Assessment Books, Ms. 11,316/125. Microfilm, London Metropolitan Archives, London.
- 1748/49 Jane Turlington, 7 March. St. Dunstan and All Saints, Register of Burials, London Metropolitan Archives, London. Ancestry <<http://www.ancestry.com>>. Accessed 4 March 2011.
- 1752–1753 Langbourne Ward, All Hallows Lombard Street Precinct and Birchin Lane Precinct, Land Tax Assessment Books, Ms. 11,316/161. Microfilm, London Metropolitan Archives, London.
- 1753–1754 Land Tax Assessment Books, Langbourne Ward, Birchin Lane Precinct, Ms. 11,316/164. Microfilm, London Metropolitan Archives, London.
- 1754 Harrow Manor. Folio 1. Lease. William Jessop, soapboiler, St. Mary-le-bone, Ann, his wife, Thomas Woolhead, grocer, and Robert Turlington, merchant, London. ACC/0076/2102/1754., London Metropolitan Archives, London.
- 1760 Martha Pailliard and William Wray, 10 January. St. Luke, Chelsea, Register of Marriages, London Metropolitan Archives, London. Ancestry <<http://www.ancestry.com>>. Accessed 3 October 2011.
- 1765 Martha Wray, 9 July. St. Leonard Shoreditch, Register of Burials, 1762–1768, London Metropolitan Archives, London. Ancestry <<http://www.ancestry.com>>. Accessed 14 March 2011.
- 1766a Robert Turlington, 28 October. St. Dunstan and All Saints, Register of Burials, London Metropolitan Archives, London. Ancestry <<http://www.ancestry.com>>. Accessed 3 March 2011.
- 1766b William Wray, burial, 30 October. St. Leonard Shoreditch, Register of Burials, London Metropolitan Archives, London. Ancestry <<http://www.ancestry.com>>. Accessed 14 March 2011.
- 1773 John Wray, burial, 13 August. St. Leonard Shoreditch, Register of Burials, 1768–1778, London Metropolitan Archives, London. Ancestry <<http://www.ancestry.com>>. Accessed 18 March 2011.
- 1774 Mary Sopp and John Alder, 25 January. St. Edmund the King and Martyr, Register of Marriages, 1754–1802, London Metropolitan Archives, London. Ancestry <<http://www.ancestry.com>>. Accessed 18 March 2011.
- 1780 County of Middlesex, Chelsea Land Tax Assessment Books, St. Luke Chelsea Parish, MR/PLT/4598, June. Manuscript, London Metropolitan Archives, London.
- 1788 County of Middlesex, Chelsea Land Tax Assessment Books, St. Luke Chelsea Parish, MR/PLT/4604, June. Manuscript, London Metropolitan Archives, London.
- Lynch, Reggie
[2009] ask Reggie. Turlington bottles, No. 1, click on “show image.” <<http://www.antique-bottles.com/pics/TurlBox.jpggturlington>>. Accessed 3 July 2014.
- MacKenzie, Alex
1801 *Voyage from Montreal on the River St. Lawrence through the Continent of North America, to the Frozen and Pacific Ocean; in the Years 1789 & 1793*. T. Cadell, Jr., and W. Davies, London.
- MacKinnon, Frank
1952 *The Law and the Lawyers*. In *Johnson’s England: An Account of the Life & Manners of His Age*, Vol. 2, ed. by A. S. Turberville, 287–309. Clarendon Press, Oxford, UK.
- MacLeod, Christine
1988 *Inventing the Industrial Revolution: The English Patent System, 1660–1800*. Cambridge University Press, Cambridge, UK.
- Marshall, Christopher, and Charles Marshall
1765–1772 Marshall Account Book. No. 61 x 35, Joseph Downs Manuscript Collection, Henry Francis du Pont Winterthur Museum, Winterthur, DE.
- Mazrim, Robert F.
2011 *At Home in the Illinois Country: French Colonial Domestic Site Archaeology in the Midwest, 1730–1800*. Illinois State Archaeological Survey, University of Illinois, Studies in Archaeology No. 9. Urbana.

- McKearin, Helen, and Kenneth M. Wilson,
1978 *American Bottles & Flasks and Their Ancestry*. Crown, New York.
- Merck & Co.
1952 *The Merck Index of Chemicals and Drugs*. 6th ed. Merck & Co., Rahway, NJ.
- Middlesex Journal: Or Chronicle of Liberty*
1770 London...Some little time after the preliminaries of peace: News item. *Middlesex Journal: or Chronicle of Liberty* 16 October: 2. London, England. <<http://www.newspaperarchive.com>>. Accessed July 2014.
- Miller, George L., and Antony Pacey
1985 Impact of Mechanization in the Glass Container Industry: The Dominion Glass Company of Montreal, a Case Study. *Historical Archaeology* 19(1): 38–50.
- Miller, George L., and Catherine Sullivan
1984 Machine-Made Glass Containers and the End of Production for Mouth-Blown Bottles. *Historical Archaeology* 18(2): 83–96.
- Morning Chronicle*
1804 Sales by Auction: Advertisement. *Morning Chronicle* 18 October: 4. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- Morning Chronicle, and London Advertiser*
1774 Pectoral Balsam of Honey: Advertisement. *Morning Chronicle, and London Advertiser* 17 September: 4. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- Morning Post and Fashionable World*
1795 Common Councilmen, Langbourne Ward: Advertisement. *Morning Post and Fashionable World* 26 December: 1. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- Museum of London
2014 Turlington Bottle. A22882 Phial, Page 14, Phials and Small, Short-Necked Bottles, Bottles 17th and 18th century, Ceramics and Glass Database, Museum of London <<http://www.archive.museumoflondon.org.uk>>. Accessed 4 July 2014.
- National Archives
1766a Will of Robert Turlington of Birchin Lane, City of London, 27 November. PROB 11/924/432-479, Will Registers, Records of the Prerogative Court of Canterbury, National Archives, London. National Archives, Discovery, Wills and Probate/Wills 1384–1858 <<http://discovery.nationalarchives.gov.uk/SearchUI>>. Accessed 30 June 2014.
- 1766b Will of William Wray of Birchin Lane, City of London, 04 November. PROB 11/924, Will Registers, Records of the Prerogative Court of Canterbury, National Archives, London. National Archives, Discovery, Wills and Probate/Wills 1384–1858 <<http://discovery.nationalarchives.gov.uk/SearchUI>>. Accessed 30 June 2014
- 1788 Will of Martha Wray, Widow of Birchin Lane, City of London, 23 September, Signed and Witnessed 1783. PROB 11/1170, Will Registers, Records of the Prerogative Court of Canterbury, National Archives, London. National Archives, Discovery <<http://discovery.nationalarchives.gov.uk/SearchUI>>. Wills and Probate/Wills 1384-1858. Accessed 30 June 2014.
- 1789 [1788] Will of Mary Pailliard, Widow of St. Luke Chelsea, Middlesex, 20 February. PROB 11/1176, Will Registers, Records of the Prerogative Court of Canterbury, National Archives, London. National Archives, Discovery, Wills and Probate/Wills 1384–1858 <<http://discovery.nationalarchives.gov.uk/SearchUI>>. Accessed 30 June 2014.
- 1792 Phelps vs. Wray. C12/641/27, Pleadings 1758 to 1800, Six Clerks Office, Court of Chancery, National Archives, London. National Archives, Discovery <<http://discovery.nationalarchives.gov.uk/SearchUI>>. Accessed 27 January 2012.
- 2012a Research Guide: Chancery Equity Suits after 1558. National Archives <<http://www.nationalarchives.gov.uk/records/research-guides/chancery-equity-from1558>>. Accessed 22 September 2012.
- 2012b Turlington. Catalog, Court of Chancery Records, National Archives, London. National Archives <<http://www.nationalarchives.gov.uk/catalogue/searchresults>>. Accessed 8 October 2012 (site discontinued).
- New Times*
1825 Genuine Patent Medicines: Advertisement. *New Times* 12 April: 4. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- New-York Daily Advertiser*
1817 Robert Bach: Advertisement. *New-York Daily Advertiser* 25 November: 2. GenealogyBank <<http://www.genealogybank.com/gbnk/newspapers>>. Accessed 22 July 2014
- New-York Gazette*
1759 By Authority of the King's Royal Patent: Advertisement. *New-York Gazette* 24 September: 1. GenealogyBank <<http://www.genealogybank.com/gbnk/newspapers>>. Accessed 7 June 2013.

- 1761a Edward Agar, Chymist: Advertisement. *New-York Gazette* 14 September: 4. GenealogyBank <<http://www.genealogybank.com/gbnk/newspapers>>. Accessed 12 July 2014.
- 1761b Turlington: Advertisement. *New-York Gazette* 16 November: 3. GenealogyBank <<http://www.genealogybank.com/gbnk/newspapers>>. Accessed 12 July 2014.
- New-York Journal*
- 1767 Gerardus Duyckinck: Advertisement. *New-York Journal* 18 June: supp. 1. GenealogyBank <<http://www.genealogybank.com/gbnk/newspapers>>. Accessed 12 July 2014.
- New-York Mercury*
- 1760 Robert Turlington: Advertisement. *New-York Mercury* 1 December: 4. GenealogyBank <<http://www.genealogybank.com/gbnk/newspapers>>. Accessed 12 July 2014.
- 1762 James Murray: Advertisement. *New-York Mercury* 25 January: 2. <<http://www.genealogybank.com/gbnk/newspapers>>. Accessed 7 November 2013.
- Noël Hume, Ivor
- 1956 A Century of London Glass Bottles, 1580–1680. *Connoisseur Year Book*, 1956: 98–103. Connoisseur, London.
- 1969 *Glass in Colonial Williamsburg's Archaeological Collections*. Colonial Williamsburg Archaeological Series, 1. Williamsburg, VA.
- Overseers of the Poor of Chelsea
- 1757 Chelsea Vestry Room, September 1757. Manuscript, Overseers of the Poor of Chelsea, 1757–1760, Kensington and Chelsea Local Studies and Archives, London.
- 1769 Chelsea Vestry Room, September 1769. Manuscript, Overseers of the Parish of Chelsea, 1765–1769, Kensington and Chelsea Local Studies and Archives, London.
- Patent Office
- 1856 *Medicinal Compound*. Turlington's Specification. A.D. 1744, No. 596. George Eyre and William Spottiswoode, London.
- Pennsylvania Gazette*
- 1753 Christopher Marshall: Advertisement. *Pennsylvania Gazette*, 27 February: 4. Philadelphia. GenealogyBank <<http://www.genealogybank.com/gbnk/newspapers>>. Accessed 14 October 2012.
- Pennsylvania Journal, and Weekly Advertiser*
- 1748 Christopher Marshall: Advertisement. *Pennsylvania Journal, and Weekly Advertiser* 20 October: 4. Philadelphia. GenealogyBank <<http://www.genealogybank.com/gbnk/newspapers>>. Accessed 12 July 2014.
- 1763a Nathaniel Tweedy, Druggist: Advertisement. *Pennsylvania Journal, and Weekly Advertiser* 24 March: 1. Philadelphia. GenealogyBank <<http://www.genealogybank.com/gbnk/newspapers>>. Accessed 12 July 2014.
- 1763b Whereas Mr. Robert Turlington: Advertisement. *Pennsylvania Journal, and Weekly Advertiser*, 17 February: 3. Philadelphia. GenealogyBank <<http://www.genealogybank.com/gbnk/newspapers>>. Accessed 12 July 2014.
- 1764 James Peters, Druggist and Chemist: Advertisement. *Pennsylvania Journal, and Weekly Advertiser* 16 February: 3. Philadelphia. GenealogyBank <<http://www.genealogybank.com/gbnk/newspapers>>. Accessed 12 July 2014.
- Pennsylvania Packet*
- 1772 Thomas Anderton: Advertisement. *Pennsylvania Packet, and the General Advertiser* 16 January: 3. Philadelphia. GenealogyBank <<http://www.genealogybank.com/gbnk/newspapers>>. Accessed 12 July 2014.
- Penny London Post, or, the Morning Advertiser*
- 1748a Robert Turlington: Advertisement. *Penny London Post, or, the Morning Advertiser* 15–18 April: 3. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1748b Plymouth Dock, Sept. 30, 1746. Mr. Turlington: Advertisement. *Penny London Post, or, the Morning Advertiser* 6–9 May: 4. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1748c To Mr. Turlington: Advertisement. *Penny London Post, or, the Morning Advertiser* 13–16 May: 4. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1749 Anthony Seal Sen., Anthony Seal Jun., Robert Turlington: Advertisement. *Penny London Post, or, the Morning Advertiser* 21–23 August: 4. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- Plummer, Alfred
- 1973 *The London Weavers' Company 1600–1970*. Routledge & Kegan Paul, London.

- Porter, Roy
- 1985 Lay Medical Knowledge in the Eighteenth Century: The Evidence of the *Gentleman's Magazine*. *Medical History* 29(2): 138–168.
- 1987 *Mind-Forg'd Manacles: A History of Madness in England from the Restoration to the Regency*. Athlone Press, London.
- 1990 *English Society in the Eighteenth Century*. Rev. ed. Penguin, London.
- 2001 *Quacks: Fakers and Charlatans in English Medicine*. Tempus, Stroud, UK.
- 2003 *Quacks: Fakers and Charlatans in English Medicine*. Tempus, Stroud, UK.
- Porter, Roy, and Dorothy Porter
- 1989 The Rise of the English Drugs Industry: The Role of Thomas Corbyn. *Medical History* 33(3): 277–295.
- Prices of Glass Goods*
- 1777 *Prices of Glass Goods, Sold by the Different Manufacturers in England, June 2, 1777*. Price List, England. Osler Archives, Birmingham Museums and Art Gallery, Birmingham, UK.
- 1809 *Prices of Glass Goods, Sold by the Different Manufacturers, in England: February 15th, 1809*. J. Heming, Stourbridge, UK.
- Public Advertiser*
- 1752 London...Whereas Divers Persons: News item. *Public Advertiser* 12 December: 2. London. 17th–18th Century Burney Collection Newspapers, Gale Cengage Learning <<http://find.galegroup.com>>. Accessed 11 April, 2011.
- 1754a Deal, February 6: Ship news. *Public Advertiser* 7 February: 1. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1754b Deal, August 5: Ship news. *Public Advertiser* 7 August: 1. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1757a To be sold: Advertisement. *Public Advertiser* 18 January: 3. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1757b London...The last Letters from Cadiz: News item. *Public Advertiser* 21 February: 1–2. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1758 Whereas the House of Mr. Robert Turlington: Notice. *Public Advertiser* 27 June: 3. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1759 For Sale by the Candle: Advertisement. *Public Advertiser* 2 March: 3. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1760 Original Balsam of Health: Advertisement. *Public Advertiser* 16 July: 4. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1761 London...It is said that several officers who belonged to the Antigallican: News item. *Public Advertiser* 7 November: 2. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1766 Martha Wray: Advertisement. *Public Advertiser* 5 November: 1. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1767 Thomas Jackson and Son: Advertisement. *Public Advertiser* 10 August: 3. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1771 Thomas Ridgeway: Advertisement. *Public Advertiser* 6 September: 4. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- Public Ledger, or, Daily Register of Commerce and Intelligence*
- 1760 L. Haskins, Balsam of Life: Advertisement. *Public Ledger, or, Daily Register of Commerce and Intelligence* 13 December: 3. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- Quebec Gazette*
- 1771 Just Imported ... Turlington's Balsam of Life: Advertisement. *Quebec Gazette* 23 May: Supplement 1. Microfilm, Quebec.
- Read's Weekly Journal, or, British-Gazetteer*
- 1757 Madrid, Feb. 8: News item. *Read's Weekly Journal, or, British-Gazetteer* 12 March: 2. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1760 Cluer Dicey, E. D. Ockell, & Company: Advertisement. *Read's Weekly Journal, or, British-Gazetteer* 8 March: 4. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- Richardson, Charles G., and Lillian C. Richardson
- 2003 *The Pill Rollers*. 3rd ed. Old Fort Press, Harrisonburg, VA.
- Ridley, Frank
- 1966 An Early Patent Medicine of the Canadian North. *Canadian Geographical Journal* 73(1): 24–27.
- Rivington's New-York Loyal Gazette*
- 1777 Turlington's Original Balsam of Life: Advertisement. *Rivington's New-York Loyal Gazette* 1 November: 1. GenealogyBank <<http://www.genealogybank.com/gbnk/newspapers>>. Accessed 22 July 2014.

- Rizzo, Betty
1983–1985 Lives of the Obscure: VIII John Sherratt, Negotiator. *Bulletin of Research in the Humanities* 86(4): 373–429.
- Roscoe, Sydney
1973 *John Newbery and His Successors 1740–1814: A Bibliography*. Five Owls Press, Wormley, UK.
- Ross, Lester A., Bryn H. Thomas, Charles H. Hibbs, and Caroline D. Carley
1975 Fort Vancouver Excavations X: Southern Fort Area. Manuscript, Fort Vancouver National Historic Site, National Park Service, U.S. Department of the Interior, Vancouver, WA.
- Saint James's Chronicle or the British Evening Post*
1766 London...Last Night died Mr. William Wray: News item. *Saint James's Chronicle or the British Evening Post* 23–25 October: 2. London. Gale Cengage Learning <<http://find.galegroup.com>>. Accessed 11 April 2011.
- Science & Society Picture Library
2014 Medicine Chest. Images 10548515-521 and 526-527, Science & Society Picture Library <<http://scienceandsociety.co.uk>>. Accessed 28 July 2014.
- S. Maw & Son
1866 *A Catalogue of Surgeons' Instruments & Appliances ... and Other Requisites in Pharmacy, the Dispensing of Medicines, Medical Glass and Earthenware ... Proprietary Articles, Perfumery and Druggists' Sundries of all Kinds*. S. Maw & Son, London.
- Smith, Nichol D.
1952 The Newspaper. *Johnson's England: An Account of the Life and Manners of His Age*. Vol. 2, ed. by A. S. Turberville, 331–367. Clarendon Press, Oxford, UK..
- Smollett, Tobias
2002 *The Life and Adventures of Sir Launcelot Greaves*, ed. by Robert Folkenflick and Barbara L. Fitzpatrick. University of Georgia Press, Athens.
- Spectator*
1712 Richard Stoughton: Advertisements. *Spectator* 27 June: 2. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- Star*
1796 To Be Peremptorily Sold: Advertisement. *Star* 18 November: 1. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- Stephanson, Raymond
2004 *The Yard of Wit: Male Creativity and Sexuality, 1650–1750*. University of Pennsylvania Press, Philadelphia.
- Stephens, Frederic George, and Edward Hawkins
1877 *Catalogue of Prints and Drawings in the British Museum. Division I. Political and Personal Satires (No. 2016 to No. 3116), Vol. III Pt.1 March 28, 1734 to c. 1750*. British Museum, London.
- Styles, John
2000 Product and Innovation in Early Modern London. *Past and Present* Vol. 168(1): 124–169.
- Sullivan, Catherine
1983 The Bottles of Northrop & Lyman, a Canadian Drug Firm. *Material History Bulletin/Bulletin d'histoire de la culture matérielle* 18(2): 13–30. Ottawa.
- Sussman, Lynne
1979 *Hudson's Bay Company Suppliers, Vol. II: A Directory of the British Commercial Suppliers Who Provided Goods and Services to York Factory and Red River, 1821–1853*. Parks Canada, Environment Canada, Manuscript Report 381. Ottawa.
- Tennent, John
1734 *Every Man His Own Doctor: Or the Poor Planter's Physician*. 2nd ed. William Parks, Williamsburg, VA. Reprinted 1971 by Printing Office of Colonial Williamsburg, Williamsburg, VA.
- Thacher, James, and James Currie
1810 *The American New Dispensatory*. T. B. Wait & Co., Boston, MA.
- Times*
1795 Camphorated Lye Water, Steers' Medicinal Warehouse: Advertisement. *Times* 7 January: 4. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- Trade Marks Journal*
1877 Robert Barclay, 95 Farringdon Street, London: Patent Medicine Vendor Trade Mark No. 6656. *Trade Marks Journal* 12 February: 400.
- Trenton Evening Times*
1937 SunRay Drug Co: Advertisement. *Trenton Evening Times* 21 January: 4. Trenton, NJ. GenealogyBank <<http://www.genealogy-bank.com/gbnk/newspapers>>. Accessed 12 December 2012.
- Truitt, Elly H.
2009 The Virtues of Balm in Late Medieval Literature. *Early Science and Medicine* 14(6): 711–736.

- Turlington, Robert
 [1742–1748] *By Virtue of the King's Patent, Turlington's Balsam of Life Is Prepared and Sold by the Patentee*. Microfilm, Countway Library of Medicine, Harvard University, Cambridge, MA.
- [1748–1749] *By Virtue of the King's Patent, Turlington's Balsam of Life Is Prepared and Sold by the Patentee*. Booklet, U120, Z17/14, Kent County Record Office, Maidstone, UK.
- [1748–1750] Bill of Directions. Manuscript, U120, Z17/14, Kent County Record Office, Maidstone, UK.
- [1748–1752] *By Virtue of the King's Patent, Turlington's Balsam of Life Is Prepared and Sold by the Patentee*. Gale, Eighteenth Century Collections Online, Print Editions: Medicine, Science and Technology.
- [1749–1752] *By Virtue of the King's Patent, Turlington's Balsam of Life Is Prepared and Sold by the Patentee*. Booklet, U120 Z17/16, Kent County Record Office, Maidstone, UK.
- [1750–1754] Bill of Directions. Manuscript, Vol. Ch–Cz, Landauer Collection, Metropolitan Museum of Art, New York.
- [1752–1766] *By Virtue of the King's Patent, Turlington's Balsam of Life Is Prepared and Sold by the Patentee*. Robert Turlington, London. Late D. Cowman collection.
- [1754–?] Bill of Directions. Manuscript, Pennsylvania Historical Society, Philadelphia.
- [1800–1920] Bill of Directions. Manuscript, Robert Turlington, London. Late D. Cowman collection.
- Tyler, Varro E.
 1995 Was Lydia Pinkham's Vegetable Compound an Effective Remedy? *Pharmacy in History* 37(1): 24–28.
- Universal British Directory*
 1791 Livery of London. In *Universal British Directory*, pp. 154. Barfoot & Wilkes, London. Ancestry, U.K. City and County Directories, 1600s–1900s <<http://www.ancestry.com>>. Accessed 21 May 2012.
- Vegotsky, Allen, and Rita Folse Elliott
 2004 Lydia Pinkham: Healer or Quack. *Early Georgia* 32(1): 23–24.
- Wallace, William Stewart, ed.
 1932 *John McLean's Notes of a Twenty-Five Year's Service in the Hudson's Bay Territory*. Champlain Society, Publication 19. Toronto.
- Watters, David R.
 1987 Excavations at the Harney Site Slave Cemetery, Montserrat, West Indies. *Annals of Carnegie Museum* 56(18): 289–318.
- Wedel, Waldo R., and George B. Griffenhagen
 1954 An English Balsam among the Dakota Aborigines. *American Journal of Pharmacy* 126(12): 409–415.
- Whitehall Evening-Post*
 1787 No title. *Whitehall Evening-Post* 16 October: 3 col. 3. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- Whitehall Evening-Post: Or, London Intelligencer*
 1748/49a DEAD. On Monday last died... Mrs. Turlington: News item. *Whitehall Evening-Post: Or, London Intelligencer* 7–9 March: 2. London. This newspaper appears to have been using the Gregorian calendar in 1749. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1748/49b Erratum. In our paper of March 9...Mrs. Jane Turlington, Mother of Mr. Robert Turlington: News item. *Whitehall Evening-Post: Or, London Intelligencer* 14–16 March: 2. London. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1749a To Mr. Robert Turlington: Advertisement. *Whitehall Evening-Post: Or, London Intelligencer* 28–30 March: 2. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1749b Mr. Robert Turlington: Advertisement. *Whitehall Evening-Post: Or, London Intelligencer* 4–6 May: 4. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1749c Whereas it has been falsely reported ... Robert Turlington: Advertisement. *Whitehall Evening-Post: Or, London Intelligencer* 15–17 June: 2. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1750 To Mr. Turlington: Advertisement. *Whitehall Evening-Post: Or, London Intelligencer* 22–24 November: 2. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1758 Balsamum Vitae Hoffmanni: Advertisement. *Whitehall Evening-Post: Or, London Intelligencer* 26–28 October: 4. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- 1761 Robert Turlington: Advertisement. *Whitehall Evening-Post: Or, London Intelligencer* 29–31 October: 4. Newspaper Archive <<http://www.newspaperarchive.com>>. Accessed July 2014.
- Wood, George B., and Franklin Bache
 1865 *The Dispensatory of the United States of America*. 12th ed. J. B. Lippincott & Company, Philadelphia.

Wootton, A. C.

1972 *Chronicles of Pharmacy*, Vol. 2. USV
Pharmaceutical, Tuckahoe, NY.

World

1788 London...On Saturday evening about nine
o'clock died...Mrs. Martha Wray: News item.
World 2 August: 3. London, England. <[http://
find.galegroup.com](http://find.galegroup.com)> Accessed 11 April 2011.

Wray, Martha, and Hilton Wray

[1774–1788] Bill of Directions. Manuscript,
Pennsylvania Historical Society, Philadelphia.

Young, James Harvey

1961 *The Toadstool Millionaires: A Social History of
Patent Medicines in America before Federal
Regulation*. Princeton University Press,
Princeton, NJ.

York Glass Company

1868 *The York Glass Company, Limited,
Manufacturers of Flint and Bottle Glass...*,
[Catalog] York Glass Company, Fishergate,
York. Catalog, Leeds University Library,
Leeds, UK.

Author Information

Olive Jones is a retired material culture researcher from Parks Canada, where she specialized in glass bottles and table wares recovered from archaeological sites in Canada. She has written on historic glass-making technology and vocabulary, contexts of glass use, and relationships between products and glass packaging.

Olive R. Jones

1947 Stonehenge Crescent

Ottawa, ON, K1B 4N7

Canada

Phone: 613-749-6899

Email: orjones1947@yahoo.ca

Allen Vegotsky has a doctorate in biochemistry with professional experience in the biomedical field. He has served as a volunteer at archaeological sites and in archaeological research for more than 30 years.

Allen Vegotsky

New South Associates

6150 East Ponce de Leon Avenue

Stone Mountain, GA 30083

Phone: 678-684-3622

Email: vegotsky@earthlink.net