

of his business as to the ethical, and often more to the former than to the latter. He therefore has to carry a great many side-lines not pertaining to pharmacy at all, in order to earn a livelihood. Now instead of reaching out for more side-lines, I should like to call the attention of my colleagues to a vocation entirely compatible with their professional standing, I mean that of Notary Public.

Since it is required by the Pharmaceutical Syllabus that each college of pharmacy of acknowledged good standing must include in its curriculum seventy-five hours of lectures in Commercial Law and Business Practice, the young pharmacist, having attended such a course, is by reason of the training he has acquired at these lectures able to perform the duties of a Notary Public a great deal better than many of the persons in whom this office of public trust is now vested. The general duty of a Notary Public consists mostly in taking affidavits and acknowledgments of signatures on legal papers, protesting of notes, executing of bills of sale, leases, mortgages, powers of attorneys, etc., etc. The income from these sources ranges from twenty-five cents for common acknowledgments, to two dollars and fifty cents for protesting notes, and then to between five dollars and twenty-five dollars for executing leases, bills of sale and other more involved documents. The receipts from the execution of these papers and similar ones is clear profit involving only the time consumed in drawing them up.

The wording of these papers is not as difficult as it seems at first sight, because printed forms are obtainable with the proper phraseology and it necessitates only the filling in of names and other stipulations agreed upon between the interested parties to complete the document.

The holding of the office of Notary Public will add greatly to the standing of the pharmacist in his community. To be appointed to the office it is best to procure the services of a lawyer or of your congressman. After the appointment, it is always advisable to see a lawyer and get instructions on essential points in making out documents to conform with the law of the State where the instrument is executed.

Nearly all official documents must either be acknowledged or sworn to before a Notary Public. His services therefore are required frequently.

I strongly recommend to my fellow pharmacists to either have themselves appointed, or procure an appointment for one of their clerks. This suggestion, if followed, will bring a great many people into the appointee's place of business who would otherwise not have come, and my experience has proven that they will ultimately become regular customers.

The druggist as a Notary is a public convenience.

HISTORY OF GLASS, ANCIENT AND MODERN.*

BY W. W. FIGGIS.

Among the first discoveries due to chance, and perfected by man's intellect, glass is certainly one of the most important.

Although glass satisfies a considerable number of our most ordinary wants, it is also to *it* that we must attribute, to a large degree, the ever progressive march

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of science. Indeed it is by multiplying the strength of man's organ of sight that glass lays bare the most hidden works of creation to his investigation, and by degrees everything is seen, studied, explained and analyzed, including the infinitely great, as well as the imperceptibly small. Few questions have been more discussed than that of the origin of glass.

Tubal-Cain, son of Lamech and Zillah, who was the eighth man from Adam, was born 3870 B. C., which would carry us back over five thousand years of this world's history; it is stated that on the coast of Palestine, near the mouth of the River Belus, he, with others, was preparing for their repast, and not finding any stones on which to place their pots, took some cakes of nitre for that purpose. The nitre being subjected to the action of fire with the sand of the shore, produced transparent streams of an unknown fluid, and such was the origin of glass. Pliny tells us that sand suitable for glass-making is found at the mouth of this river Belus, which flows into the Sea of Judea. This opinion is reported with some variations on the authority of Flavius Josephus by Palisey, but this account has found and still finds many doubters among chemists, who claim it impossible to qualify substances in the open air, which in our day with our improved processes can only be fused by means of furnaces constructed expressly for that purpose, but of this there is no doubt, that glass was made centuries before furnaces were thought of, and the question remains, HOW? If this be doubted we cannot place in chronological order the productions found in great numbers in our museums. While dating back to an extremely early epoch, many of these articles bear no indication of the place, or date of their manufacture; at the same time there is no doubt that to remote antiquity belong the Theban glass makers, who are represented in paintings on the tombs of Ben Hassen 3500 B. C. These paintings represent a Theban using a blow-pipe, very similar in all respects to those used at the present day (Wilkinson, Vol. III, 89).

Signor Drovetti found at Thebes a dark blue piece of glass, which is now in the British Museum, and according to Lepsius's chronology establishes the date, because this piece contained the name of Nuantif IV. Martial alludes to the importation of Egyptian glass into Rome, and it is mentioned in an ordinance of Aurelian, also of this period. About this time, Hadrian in a letter addressed to the Consul Servianus mentions glass-blowing as one of the chief industrial occupations of the inhabitants of Alexandria. The Phoenicians probably derived their knowledge of glass from Egypt. Many towns in Egypt practiced the art of glass manufacture, for Pliny boasts of the glass manufacturers of Sidon, and Herodotus and Theophrastus sing praises of the marvellous productions of the Tyrians.

The fame of these different manufacturers of glass could not remain unknown, and later the Romans under Caesar Augustus subdued Egypt and ordered that glass should form part of the tribute to be imposed on the conquered. Then Rome developed the art of making glass in a most remarkable manner, and in some respects has never been excelled or, perhaps, even equaled. (Pliny Nat. Hist., XXXVI, 26-27). Theodosius II, Roman Emperor A. D. 408, desiring to encourage glass industries, exempted all glass workers from personal taxes.

In the middle ages Assyria was making glass, and a vase of transparent greenish hue was found in the north-west palace of Ninevah, and is now in the British

Museum; on one side was engraved a lion, on the other the name of Sargon, King of Assyria (722 B. C.).

The Greeks of the shores of the Mediterranean excelled in the art of making glass at a very early period, some centuries before the Christian era.

Constantine I, surnamed the Great, born A. D. 274, whose seat of Empire was Byzantium (Constantinople), hastened to attract glass makers from the West. In spite of all these successes in the East, the time came when the West excelled in its old industry; Venice reclaimed it, and in the 14th Century nearly monopolized the industry, according to Italian writers Carlo Marin and Count Filiasi, who also state that some families fleeing from war took refuge on the islands of the lagoons. Venice endeavored to hold this trade and issued strict statutes that if a workman carries his art into a foreign country an order to return will be sent and, if not obeyed, his nearest relatives will be put in prison, and if he persists in staying away an emissary will be sent to kill him. Several instances of the carrying out of this threat are recorded, but even with this threat, it was not sufficient to stop the spread of the glass industry into Germany, Bohemia, France, England and Belgium.

It is interesting to note the historical point made about gentlemen glass workers, showing that the mere trade of glass-making carried with it that every one of them was ennobled by the fact of the nature of his trade.

At this juncture a reasonable question is—Did the ancients employ glass bottles? Yes. Egypt has left us bottles made of simple glass and others covered with wicker work or papyrus stalks. The latter offer the greatest resemblance to those now used for Florence oil, and are still used by the Egyptians under the name of "damadjan."

Documents prove that glass bottle factories were run in France, 1290, by a man called "Macy." Also, in 1469, John Petit Fay was commissioned by the Court of Louis XI to manage a bottle factory.

The first industrial enterprise established in the United States was in Virginia, soon after 1607, near Jamestown. In 1639 coarse bottles were made in Salem Mass., in 1683 in Philadelphia; two factories were operated in New York City in 1732. In 1747 one factory was operated in Connecticut, one in Brooklyn, N. Y., in 1754, and one in Germantown, Mass., in 1760. In 1738 the first factory was started in New Jersey in Allowaystown, Salem County, by Casper Wistar, who brought over four skilled workmen from Rotterdam. In 1795 the first factory was started in Pittsburgh, Pa., and in 1813 there were five factories in operation in that town.

The appearance of the neck of an old bottle is the surest test of its age; the mouths of our first bottles were cut with shears while in a plastic condition, which explains the irregular edge, entirely devoid of any rim; the base invariably possesses a rough circular scar, formed by breaking the bottle from the punty rod, which holds it while the workman finishes the neck. Now of course, a snap tool is used.

Between the years 1840 and 1850 there seems to have been remarkable progress in glass bottle making in the Eastern states, and Pennsylvania in particular. Old shapes can still be found in nearly every farm-house, of curious designs—patriotic, political and masonic.

One of the first successful glass works in the United States was at Nauheim,

Lancaster, Pa., conducted by Baron William Henry Stiegel, about 1769. In 1771 a glass factory was started in Philadelphia, Pa. (Kensington), by Robert Towars and James Leacock and taken over in 1783 by Thomas Leiper, then, in 1803, by James Rowland & Co., afterward owned for about four years by Thos. W. Dyott; in 1842 by Henry Seybert; in 1844 by H. B. Benners, S. Decatur Smith and Quinton Campbell, Jr.

In 1775 the Stanger Bros. erected a glass factory in Gloucester Co., New Jersey, at a point afterwards known as Glassboro. In 1813 Rink, Stanger & Co. established new works, and one of the most remarkable old bottles made in the United States came from this factory during the presidential campaign of 1840, in the form of a log cabin for an enterprising liquor merchant in Philadelphia. Another one of the most characteristic shapes was what is known as the "Jenny Lind," with a globular body and a long, slender neck, in 1850, when the great singer came to America under the direction of P. T. Barnum. The original metal mould in which these bottles were blown is still in existence in the oldest glass factory in the United States, known as the Whitney Glass Co., which has been absorbed by other interests, and now forms a part of the Owens Bottle Machine Co.

In 1806 James Lee and others started a glass plant on the banks of the river where Glasstown is now situated; it passed into the hands of Gideon Scull, then Nathaniel Solomon managed it for a company of blowers, but made a failure. In 1829 Burgin and Wood took over the plant; in 1830 the name was changed to Burgin, Wood & Pearsall; in 1833 to Burgin & Pearsall; in 1836 to Scattergood and Booth Co.; in 1838 to Scattergood, Haverstick & Co.; in 1844 to Scattergood & Whitall; in 1845 to Whitall & Bro.; in 1850 to Whitall Bro. & Co.; in 1857 to Whitall Tatum & Co., and in 1901 to Whitall Tatum Company, Incorporated.

Finally as a matter of interest you may wish to know the probable inception of the druggist's show bottle:

When Julius Caesar invaded Ireland, a boat was sent ashore from the offing to locate the most advantageous landing-place. A spot was selected on a shelving shore directly opposite a certain apothecary's shop, in the windows of which were certain large bottles containing drugs which were in process of maceration, and the contents showed different colored liquids. On a promise of immunity as a reward, the arrangement was made that this apothecary would place lanterns behind these bottles to guide the landing of troops, which was made that night. The undertaking was successful and, to commemorate the same, an edict was issued by Julius Caesar that thereafter all apothecaries would be honored by being allowed to use colored carboys to identify their establishments.

"The Pharmaceutical profession being one which demands knowledge, skill and integrity on the part of those engaged in it, and being associated with the medical profession in the responsible duties of preserving the health and dispensing the useful though often dangerous agents adapted to the cure of disease, its members should be united on the ethical principles to be observed in their relations to each other, to the medical profession and to the public."