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J. Wedgwood

JOSIAH WEDGWOOD, F.R.S.

HIS PERSONAL HISTORY

BY

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AUTHOR OF "SELF-HELP" "CHARACTER" "THRIFT" ETC.

*Never hasting, never resting,
With a firm and joyous heart,
Ever onward slowly tending,
Acting, aye, a brave man's part.*

*Undepressed by seeming failure.
Unelated by success;
Heights attained, revealing higher,
Onward, upward, ever press.*



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JOSIAH WEDGWOOD

CHAPTER I

JOSIAH WEDGWOOD—BIRTH AND EDUCATION

JOSIAH WEDGWOOD was born in the house adjoining the Churchyard Works at Burslem, Staffordshire, in 1730. The actual date of his birth is not known; but his baptism is recorded in the parish register of St. John's, Burslem, in these words: "Josiah, son of Thomas and Mary Wedgwood, baptized 12th July, 1730."*

Josiah's father was a potter, like his forefathers before him. He possessed a small estate, including a pottery, adjoining the Burslem Churchyard. His mother's maiden name was Mary Stringer, the daughter, it is said, of a nonconformist minister. She was a small and delicately organized woman, quick and sensible, and kindly in her disposition.

Thomas and Mary Wedgwood had thirteen children in all—seven sons and six daughters.

* It is carved on his monument at Stoke-upon-Trent that he was "born in August, 1730"; but this must be a mistake, as he was baptized in the previous month.

Josiah was the youngest of the family. In that respect he resembled his contemporary, Sir Richard Arkwright, who was the youngest of thirteen children.

From the year 1710 to 1715 Burslem was the principal seat of the pottery manufacture in Staffordshire. There were few pot-works anywhere else in that county. Of the fifty small potters in Burslem many were named Wedgwood. They and their ancestors had been manufacturers of earthenware for more than two hundred years.

Burslem used to be called the Butter Pottery, meaning the place where butter-pots were principally made. The other earthenware produced in Burslem was for the most part coarse in texture, clumsy in design, and very liable to fracture; yet it was not totally devoid of taste, either in form or ornament.

It may also be mentioned that at the beginning of the eighteenth century there were seven small potters at Hanley (now a place of some forty thousand inhabitants); but there was only one horse and one mule in the hamlet. There was neither cart nor carriage of any kind in Hanley, the roads being almost impassable for even pack-horses. The coals used in the place were carried on men's or women's backs. There were only two houses at Stoke—Ward's and Poulson's—but no pot-works as yet existed there.

Very little is known of Josiah's childhood. There are, unfortunately, no family letters or journals of the period to refer to; and biographical material of any description is not to be depended on. There have, indeed, been traditions and surmises printed from time to time, but these are not to be relied upon for accuracy.

It was, on the whole, a good thing for Josiah that he was one of a numerous family. On entering life he found a little world of boys and girls about him. The child in a large family receives a kind of social education by contact with his brothers and sisters. The little corners of his temperament are rubbed off and smoothed down, as with boys in a public school. If he wishes to pass comfortably through life, he finds that he must give and take, especially when, like Josiah, he has to make his own way in the world.

Not much is recorded about his boyhood. He played about the fields and strips of waste ground near the Churchyard Works. There were occasionally pack-horses at the pottery waiting for their loads of ware. As riding was one of his early ambitions, he occasionally bestrode the pack-horses, held on by the willing packmen.

The mother had of course plenty to do in bringing up such a "long family." She had to feed, to clothe and maintain them. But she never was found wanting. She was, as we have

said, lively, quick, and sensible, with a soul full of kindness. She was any thing but selfish or hardened by the number of her children. With a heart opened to them all, young as well as old, she proved herself one of the best of mothers. She taught her children the value of industry,—for, indeed, the greater part of them had little else to look forward to,—together with those good rules of life: integrity, self-help, self-restraint, and perseverance.

Little is known about the school education of her youngest son. When able to toddle about, Josiah was sent to a dame's school to learn his A B C. This was at that time the only school in Burslem, and he was sent there more to keep him out of the way of the other children, or perhaps out of mischief, than for any learning he received.

The local historian, Simeon Shaw, says that scarcely any person in Burslem learned more than reading and writing until about 1750, when some individuals endowed the free school for instructing young persons to read the Bible, write a fair hand, and know the primary rules of arithmetic. Josiah's early education was thus limited to reading and writing.

When seven years old he was sent across the moors to a school at Newcastle-under-Lyme, kept by a Mr. Blunt. The school was about three and a half miles from Burslem, and in fine weather his walks across the fields and

commons were joyous and healthful. Among his school-fellows were several who afterward achieved considerable distinction, though none proved so great as that of Wedgwood himself.

He remained, however, only a short time at that school. He was taken away at his father's death, which occurred in June, 1739, when Josiah was only nine years old. All that he had learned up to this time were the beginnings of reading, writing, and arithmetic. The rest of his knowledge and learning he accomplished by himself. Like many men of action and enterprise, like Brindley and Stephenson, he was, for the most part, his own educator.

Josiah's father, Thomas Wedgwood, did not leave much money or property behind him. By his will, dated 26th June, 1739, he left to his eldest son, Thomas, the Churchyard Pottery, and all his real estate, with a provision for his wife for her maintenance and "the proper bringing up of her younger children." Twenty pounds were to be paid to six of them on their reaching twenty years of age. The eldest daughter, Ann, was omitted, from which it may be inferred that she had done something displeasing to her father; and he could not forgive her, even in his dying hours.

Josiah was included among those who were to receive twenty pounds on their coming of age; and this was the entire capital on which he began his industrial and artistic career. As

he himself afterward said of his fortunes : "I myself began at the lowest round of the ladder."

To recur again to Josiah's early education. Mr. Leslie, afterward Sir John Leslie, professor of natural philosophy in the University of Edinburgh, was, in the early part of his career, the tutor of Wedgwood's eldest sons. He knew much of the history of the proprietor of Etruria, and after his death collected materials for his biography. He says that Wedgwood's early education was confined to the usual routine of a country school, where he learned no language but his own, and that imperfectly. Although deprived of the advantage of a liberal education, by diligence and perseverance he found his own way to useful knowledge and the rightful application of it.

Mr. Leslie records that Josiah himself attributed much of his success in after life to the opportunity which was given him during a long illness to repair, by reading, the deficiencies of his mental training. His anxiety to accomplish this end as he grew up, and also the urgent way in which he advised his children to gain all the knowledge they could in their early life, show how keenly he felt the disadvantages from which he himself had suffered.

The manner in which Josiah accomplished not only his own but his children's education will be found set forth in the following chapters.

CHAPTER II

THE WEDGWOOD FAMILY

So numerous are the Wedgwoods in Staffordshire that they might almost be described as a clan. They resided principally in Burslem and the neighborhood ; but they spread from thence into Yorkshire, Cheshire, Cumberland, Westmoreland, and other counties, where many of them continued to work at the pottery trade.

The surname of Wedgwood half fills the parish registers of Burslem in the seventeenth and eighteenth centuries. It is said that one-third of the inhabitants of the parish then bore the name. According to old deeds and charters the first Wedgwood resided at a place called Weggewood, a hamlet in Staffordshire, about four miles west of Newcastle-under-Lyme. As far back as 1370, in the 13th of Edward III., Thomas de Weggewood was frank pledge or head borough of the hamlet of Weggewood.

The family accumulated property, not only by their industry, but partly by their marriages to ladies of distinction. In 1470 John Wedgwood married Mary, the daughter and heiress of John Shaw, and thus possessed the estate of

Harracles, in the parish of Norton, near Leek. The property was inherited by the elder branch of their descendants, which, for want of issue, shortly became extinct.

The second branch of the family removed to Burslem ; and the first of them we find mentioned is Gilbert Wedgwood, who about the year 1600 married Margaret, daughter and co-heiress of Thomas Burslem, Esq.; and by her he had Burslem Wedgwood and Thomas Wedgwood.

Thomas, the second surviving son of Gilbert and Margaret, was a man of considerable property. He owned a large part of Burslem, including three or four pot-works. He married Margaret Shaw, and had by her a family of several sons and daughters. He died in 1679. Thomas was the ancestor of the families known as the "Overhouse Wedgwoods" and the "Churchyard Wedgwoods"; the latter was so called because their pot-works were close to the Burslem Churchyard.

Another son of Gilbert Wedgwood and Margaret Shaw married in 1684 Mary Leigh, another small proprietress. They had four sons and five daughters. The eldest son, Thomas, inherited from his father the Churchyard pot-works. On arriving at maturity he married Mary Stringer, by whom he had thirteen children—seven sons and six daughters. Josiah, the great potter, was the youngest of the family.

To return to the origin of the Wedgwoods as potters. We find that Gilbert Wedgwood settled at Burslem in 1612, and became the ancestor of a long line of potters. He manufactured most of the varieties of earthenware in ordinary use. The ware was of a common description, mostly butter-pots, basins, jugs, porringers, and such like. Timber- or woodenware, for spoons and dishes, continued to be used.

The best earthenware was imported from abroad, mostly from Delft, in Holland. The Staffordshire potters tried to imitate the foreigners, and eventually succeeded. Before long they equalled them, and obtained part possession of the home market. Delft-ware was manufactured in Burslem toward the end of the seventeenth century. In 1691 one John Wedgwood made a puzzle-jug in the style of delft-ware. It was called a puzzle-jug because it was so contrived with perforations in various parts of the jug that it was almost impossible to drink from it without spilling a portion. There were imprinted on it the following lines :

“ Here, gentlemen, come try your skill,
I'll hold a wager, if you will,
That you don't drink the liquor all,
Without you spill, or let some fall.”

The Wedgwoods continued to be potters, and their numbers in Burslem increased. At the

same time they did not subsist entirely by the consumption of their pottery ware. One of them, Dr. Thomas Wedgwood, at the end of the seventeenth century combined farming with pot-making. His son, of the same name, resided at the Red Lyon, and was an inn-keeper as well as potter, though whence the title of doctor was derived we do not know.

As the profits of potters were then very small, so were the wages of their workmen. Wedgwood's grandfather had, in 1715, three workmen to whom he paid four shillings a week, and three others to whom he paid six shillings a week.

Apprentices were still more poorly paid. Aaron Wood was apprenticed to Dr. Thomas Wedgwood in 1731. During the first three years of his apprenticeship he was paid one shilling weekly. During the next three years he was paid one shilling and sixpence weekly; and in the last and seventh year he was paid four shillings weekly. Besides his wages, Aaron Wood had annually a pair of new shoes. When Aaron's apprenticeship expired, he was engaged for five years as a journeyman at five shillings a week.

Dr. Thomas Wedgwood, junior, the inn-keeper, did something to improve the manufacture of pottery. Besides manufacturing imitation agates, marbles, and coffee- and tea-pots, he eventually succeeded in producing a

pure white stoneware. His workmen also made baking-dishes, milk-pans, pots, jugs, porringers, pitchers, and other sorts of crockery.

The chief hindrance to the expansion of the trade of Burslem and the neighborhood was the horrible state of the roads and by-ways. At the beginning of last century Burslem was a poor, struggling little village of thatched houses. When the Rev. Mr. Middleton, incumbent of Stone, was enforcing upon his hearers the duty of humility, he said they might be compared to so many sparrows, as all of them had been hatched under the thatch. The Big House, with the adjacent earthenware manufactory, erected by Thomas and John Wedgwood in 1750, was the only building in Burslem covered with slates.

Hanley, Shelton, Lane, and Stoke were of still less importance than Burslem. Longport did not exist until the construction of the Trent and Mersey Canal. The original potters scattered themselves over the districts in which clay, wood, and coal were found. The primitive pottery works were widely spread over an area of some ten miles in extent.

The houses in which the families of the workers lived were only thatched hovels, sometimes covered with mud. The midden was a conspicuous object before every door. In many places there were mounds of ashes and shard-rucks, consisting of broken pots and spoiled earthen-

ware. Beside them were the hollows from which the potters had dug their clay. These were usually filled with stagnated water. Every thing was coarse, rude, and unwholesome.

Yet ale-houses abounded, for the people were greatly given to drink. As an excuse it may be said that the earthenware was usually sold in the public-houses. The potters had their sports, too—miserable remnants of “Merry England.” In the centre of Burslem was a high Maypole, at the place where the town-hall now stands, around which the jolly potters held their festivals. They had many so-called amusements—cock-throwing, goose-riding, bull- and bear-baiting. Bull-baiting was continued down to about sixty years since. Each pottery had its special wake, which was usually a saturnalia of drunkenness.

The morals and manners of the people were, of course, brutal and vicious. When John Wesley visited the potteries, about the middle of last century, a crowd of people assembled to laugh and jeer at him, and proceeded to pelt him with mud. The following is from his diary on the 8th of March, 1760 :

“Went from Wolverhampton to Burslem, a scattered town on the top of a hill, inhabited almost entirely by potters, a multitude of whom assembled at five in the evening. Deep attention sat on every face, though as yet accom-

panied with deep ignorance ; but if the heart be moved toward God, he will in due time enlighten the understanding.

“ *Sunday, 9th.*—I preached at night to near double the number, some quite innocent of thought. Five or six were laughing and talking till I had nearly done ; and one of them threw a clod of earth which struck me on the side of the head, but it neither disturbed me nor the congregation.”

A few years later John Wesley preached at the same place, and entered in his journal these words : “ I began preaching at Burslem. Even the poor potters here are a more civilized people than the better sort (so called) at Congleton.” The women who attended his preaching assumed, to a certain extent, the garb of men, and were quite as ready with their oaths. Every thing was rude, barbarous, and uncivilized.

In most cases an ordinary pot-work was carried on by a man and a laborer. When the potter had sons and daughters, they helped in the work. The sons dug the clay, the man fashioned and fired the ware ; and, when the goods were ready, the mother and daughters filled the panniers, swung across the backs of horses or donkeys. Their drivers then drove them through the lanes to fairs and markets in order to sell the manufactured goods. The poor brutes were driven on with whip or cud-

gel, the men and women mostly with pipes in their mouths.

The roads in the neighborhood of Burslem were of the worst description. The lanes were known as "hollow ways," and in wet weather they were streams of muddy water. When the poor brutes, laden with their panniers of crockery, could not toil through the deep and sticky mud, they often fell down and smashed the ware. Sometimes they broke their legs, and were either shot or left to die—a happy release for the poor overworked animals.

These muddy lanes were unenclosed. When the horses and donkeys could not pass through the hollow ways, they were driven on to the adjoining commons or moorland, and went along in single file by the steep escarpments of the road. It was long before carts or wagons could be used at Burslem. Even at the beginning of last century they were very rare in the potteries.

But in course of time the earthenware manufactured in Staffordshire improved. The black-glazed or ruddy-colored articles were gradually replaced by brighter and yellower ware, although, as has already been stated, wooden spoons, plates, and dishes long continued to be used. A great impulse was given to the manufacture of improved earthenware by the immigration and settlement of Dutchmen and Germans in Staffordshire. They introduced the manufac-

ture of delft-ware. The native manufacturers vied with the foreigners, and they were soon able to export their ware to foreign markets.

Toward the end of the seventeenth century the two brothers Elers, from Delft, followed the Prince of Orange to England, and settled in Staffordshire for the purpose of manufacturing stoneware. They hired an old thatched farm-house, with some adjoining land, in a secluded spot near Bradwell. The small pot-work which they erected was scarcely discernible from Burslem. The ware which they turned out was found to be of a finer description than any manufactured in the neighborhood.

The Elers made the greatest improvement in the potter's art of England by introducing the salt glaze—that is, by firing their ware with the vapor of common salt at a high temperature. They washed, and levigated, and in various ways prepared the clays, giving the ware a fineness, durability, and solidity which were entirely new. The ornaments and mouldings were sharp in execution and graceful in design, far beyond the efforts of the Staffordshire potters at that time.

The Elers discovered a vein of clay which they found suitable for their purposes near Bradwell Wood. This clay, carefully levigated, and covered with an excellent glaze, yielded a red ware, like the Etruscan or Japanese, hard

and compact in texture, and admirable in design. The Elers, besides their red ware, also produced an Egyptian black, by the mixture of manganese with the clay before it was fired. They were thus the precursors, or, it may be, the originators, of the fine black bodies of Josiah Wedgwood and other Staffordshire manufacturers.

The Elers conducted their operations with perfect secrecy. No strangers were admitted to their pottery. The windows were blinded. Only the stupidest workmen were employed to turn the thrower's wheel. Even idiots were preferred, while those workmen who appeared more than ordinarily skilful were sworn to secrecy. They were locked up while at work, and were carefully examined when they left the premises.

These measures excited the prying inquisitiveness of the Burslem potters. The men were foreigners; any thing was lawful against foreigners. They manufactured their fine wares in secret. The secret must be discovered. Two Burslem potters, Astbury and Twyford, set their wits to work. Astbury pretended to be an idiot. He applied at the pottery for work, obtained it, and was set to turn the wheel. To maintain his character of idiot he made numerous mistakes; he quietly submitted to the kicks and cuffs which the other workmen bestowed upon him.

But all the while Astbury's eyes were very wide open. In turning the wheel he carefully witnessed every process, and examined particularly every utensil which was employed. "The ass," as he was supposed to be, was allowed to go through every department of the works, and on returning home at night he made models of the various implements employed. He also preserved careful memoranda of the various processes he had seen. He remained in the works for two years, and at the end of that time he was master of the "secrets" of the Elers' manufactory.

About the same time Twyford, another Burslem potter, discovered the same secrets, but it is unnecessary to describe his pretences of idiocy. On their discharge both began business on their own account at Shelton. They made red ware, crouch-ware, and white stone-ware from the native clays, using salt glaze for some of the vessels and lead ore for others. Astbury seems to have been the most successful of the two. He made journeys to London, where he sold his ware, and obtained further orders.

The Elers were disgusted with the treatment which they had received at Burslem. They eventually left the place, and in 1710 removed to Chelsea, where they connected themselves with a party of Venetian glass-makers who had established themselves under the auspices

of the Duke of Buckingham. The Elers also started a manufactory of pottery. Their porcelain achieved a very high reputation, and until the time of Josiah Wedgwood their pottery ware was considered to be the best in the country.

By whatever means Astbury had mastered the secrets of the Elers, he was a man of invention and originality, and did much to accelerate the improvement of stoneware in Staffordshire. When he commenced business at Shelton, he began to use pipe-clay for coating over and washing the insides of vessels. Tobacco-pipe clays are found all over the country. In the reign of Elizabeth the pipes were so small and of such a peculiar shape that they were known as "fairy pipes"—the same sort of pipes that the late Charles Keene used to smoke. In course of time they were made larger, but always of white clay. Astbury, by constant improvements, eventually produced his white-dipped ware, and white stoneware, which became an important article of commerce.

Astbury was also the first to discover, though it was by accident, the uses of burned flint in the manufacture of stoneware. While travelling on horseback,—the usual method of travelling in those days,—he found, on arriving at Banbury, that the horse on which he had ridden was so much affected in the eyes that he feared that blindness would result. He con-

versed with the hostler at the inn on the subject, and the latter recommended the employment of burned flint. This was quite a new idea to Astbury. However, a piece of flint was put into the fire, and allowed to become red hot. After the flint had cooled it was reduced to powder, some of which was blown into the horse's eyes, producing such immediate and effectual relief that Astbury was enabled to proceed on his journey. He was an observant man, and was much struck by the pure whiteness which the flint attained on being burned and the ease with which it might be reduced to powder.

On returning to Shelton he obtained some flints, burned them, and introduced them into his clay. The result was a finer and whiter kind of ware than any that had yet been produced. He shortly obtained a preference for his ware, and when the secret became known,—for nothing can be long kept a secret in the pottery district,—ground flint soon became a general ingredient in the potter's materials.

One of the earliest connections of Brindley with Staffordshire was the erection by him of an improved flint-grinding mill near Burslem in 1758. The flint was eventually ground and used in water, so as to avoid the lung diseases to which potters were subject when flint was ground in its dry state. It must also be stated that one Thomas Benson was the first to make the discovery of grinding flints in water.

Samuel Astbury, son of the eminent potter, married Miss Elizabeth Wedgwood, sister of Thomas Wedgwood, father of Josiah, and thus the ability of the Astburys was united to the genius of the Wedgwoods and their descendants.

CHAPTER III

JOSIAH WEDGWOOD LEARNS HIS TRADE

ON the death of Thomas Wedgwood in June, 1739, his youngest son, Josiah, who was only nine years old, was taken from Mr. Blunt's school at Newcastle-under-Lyme, and was shortly after employed at his brother's pottery. × Thomas, the eldest son, had succeeded to the small estate and the pottery business, with provision for the maintenance of his mother and her large family.

Josiah early displayed a taste for modelling. While at school he showed some knowledge of cutting out designs on paper. He had the run of his brother's factory, and soon after he left school he distinguished himself by his readiness to imitate in clay whatever objects struck his fancy. He seems to have had a natural bent toward modelling. He often amused his acquaintances with imitations in clay of toy figures. His clay model of a mountebank's stage, with the doctor and his suite, and all the usual accompaniments, excited much admiration among his friends.

The next event of which we have positive

knowledge is that Josiah was apprenticed to his brother Thomas at the age of fourteen. X The deed of his apprenticeship is still preserved in the Hanley Museum. Five years is the term of apprenticeship mentioned in the indenture, but as seven years was the usual period allowed in such agreements, it is inferred that Josiah had already served for some time in the pottery X when his apprenticeship commenced. Shaw, the local historian, states that he worked as a thrower at the early age of eleven years; and he adds that a workman of his day named John Fletcher could remember making balls of clay for Josiah and his elder brother Richard, both throwers, when they were seated at two corners of a small room and he was placed between them.

The pottery turned out at the Churchyard Works was of a common description, consisting chiefly of black and mottled ware, baking-dishes, pitchers, milk-pans, porringers, and such like. Butter-pots were made in large numbers. X The butter-pot was a coarse cylindrical vessel, about fourteen inches high, made from the clay found in the neighborhood of Burslem. These pots were glazed before firing with a mixture of lead and manganese, and were sent on the cratemen's backs to every part of the adjoining country, or sold to the higglers, who carried them from village to village in the panniers of their donkeys.

Josiah continued to apply himself to the art of throwing. The thrower is the person who sits in his shed, near the potter's wheel, and forms by hand from the moist clay, as it revolves, the crock, the butter-pot, the porringer, and such like wares. A workman weighs a portion of clay, and hands it to the thrower, who is seated at his revolving disk. The boy or girl employed for the purpose turns the wheel, which is attached to the disk by a band. The disk is made to rotate horizontally, while the thrower, who is seated, fashions the vessel by his hands and fingers after the patterns or guides before him, which have been prepared for the purpose. Thus the throwing is the first and most important operation in forming the shape of vessels.

There are other workmen employed in finishing the ware. For instance, the stouker, in another shed, forms the handles of the vessels and attaches them while moist to the cup or porringer; while in another shed the ware is ornamented with various colored slips. Thomas to a slight extent improved the manufacture, as, for example, by making moulded ware, which was a somewhat higher branch of his business. But it was only when Josiah began to achieve distinction that this part of the manufacture attracted attention. Several of his early pieces were designed chiefly for the tea-table and the dessert-service; they were

moulded very neatly in the form of pineapples, leaves, shells, and other natural productions. This talent he afterward applied in the extensive manufacture of his famous jasper models.

It was observed that, though very young, Josiah made rapid progress as a thrower. He had a remarkable eye for proportioning the clay under his hands; and his skill in forming the vessel on the potter's wheel soon attracted the admiration of his fellow-workmen. But an unfortunate attack of a malignant disease compelled him for a time to abandon this department of his trade.

In 1741, when Josiah was over eleven years old, virulent small-pox broke out in Burslem. The house in which the Wedgwoods lived was close to the churchyard, and the children of the family were mostly attacked by that horrible disease. One of the worst cases was that of the young thrower, who was covered with confluent pustules from head to foot. He was almost at death's door, but fortunately escaped with his life; but long after his partial recovery he was left in a state of almost utter prostration.

One of the worst effects of the disease was the agonizing pain which he suffered in his right knee. Doctors were consulted, but no application—no fomentation, liniment, or leeching—could alleviate his suffering. After many weeks of agony he tried to rise from his bed,

but fell back again helpless. At length he got up and tried crutches, but found he could scarcely walk. The pain, it is true, abated, but the knee was comparatively useless through stiffness and deadness. By-and-by, as his strength increased, he was able to return to his work.

His brother Thomas having already observed his efficiency as a thrower, which had attracted the attention of his fellow-workmen, determined to attach Josiah to his work by binding him as his apprentice. Three years had elapsed since his entering the works, but in his fourteenth year (11th November, 1744) the ceremony of permanently securing him was performed. The indenture was drawn up, signed, and witnessed by himself, his mother, his eldest brother (the head of the pottery works), and his two uncles, Samuel Astbury and Abner Wedgwood.

The indenture provided that Josiah Wedgwood was to be apprenticed to his brother for five years, and that he was to "learn the Art, Mystery, Occupation or Imployment of Throwing and Handling, which he, the said Thomas Wedgwood, now useth, and with him as an Apprentice, to Dwell, Continue, and Serve," until the expiration of the term agreed on. The apprentice was to be allowed his meat, drink, washing, and lodging, with suitable apparel "of all kinds, both linen and woollen, and all other necessaries, both in sickness and

in health"; in return for which his master was to teach, or cause him to be taught, "the art of throwing and handling"; but nothing was said in the indenture as to any wages to be paid to the apprentice.

The year after Josiah's indenture was signed, in 1745, the Highland Rebellion broke out, and Prince Charlie, at the head of a small army, had the hardihood to invade England. They passed through Cumberland and the northern counties, and, entering North Staffordshire, halted at Leek, and when they reached Bagnall, the Pretender and his staff, uninvited, breakfasted at Justice Marshall's. The rebels plundered the house, and made the justice pay a fine of three hundred pounds. Ward, in his "History of Stoke-upon-Trent,"* relates the incredible story of Justice Marshall having afterward caught a sick Highlander, had him flayed, and sent his hide to be tanned for a drumhead!

The Pretender and his army reached Derby, but proceeded no further. In all haste they retreated to the North. The Duke of Cumberland, with an increasing army, lay for a time at Shelton and Stone. The people of the county were apathetic, though they could not but feel excited by the invasion of the wild mountaineers. The country was, however, soon cleared, and the poor unfortunate Highlanders were eventually trodden down at Culloden.

* P. 230.

To return to the apprenticeship of Wedgwood. He was now fifteen years old. His right knee still continued stiff and painful. Remedies were applied and rest taken, but without avail. He could only sit while at work with his right leg extended before him on a stool. This attitude so hampered his position at the wheel and interfered with his efficiency that he was under the necessity of altogether abandoning the thrower's bench. It might be supposed by some that this was a calamity, but in reality it proved a blessing. We often repine at what we call our "ill-luck," when, in truth, a mercy has been vouchsafed to us. This inability to continue at the thrower's bench proved the turning-point of Wedgwood's career.

The Right Honorable W. E. Gladstone, in his address at Burslem on the founding of the Wedgwood Memorial Institute,* feelingly observed: "Then comes the well-known small-pox, the settling of the dregs of the disease in the lower part of the leg, and the eventual amputation of the limb, rendering him lame for life. It is not often that we have such palpable occasion to record our obligations to the small-pox. But, in the wonderful ways of Providence, that disease, which came to him as a twofold scourge, was probably the occasion of his subsequent excellence. It prevented him

* "Wedgwood: an Address delivered at Burslem, Staffordshire, 26th October, 1863."

from growing up to be the active, vigorous workman, possessed of all his limbs, and knowing right well the use of them; but it put him upon considering whether, as he could not be that, he might not be something else, and something greater. It sent his mind inward; it drove him to meditate upon the laws and secrets of his art. The result was that he arrived at a perception and grasp of them which might, perhaps, have been envied, certainly have been owned, by an Athenian potter. Relentless criticism has long since torn to pieces the old legend of King Numa receiving in a cavern, from the nymph Egeria, the laws which were to govern Rome. But no criticism can shake the record of that illness and that mutilation of the boy Josiah Wedgwood, which made for him a cavern of his bedroom, and an oracle of his own enquiring, searching, meditative, fruitful mind."

Many years, however, elapsed before the amputation of his right leg. He suffered severely for many years, yet he never relaxed his efforts to improve himself, being still courageous, patient, and valiant, even in the midst of tormenting pain. Being unable to pursue the work of a thrower, he went to the moulder's board. He first turned his attention to improvements in minor points of detail; but in course of time, as his experience became enlarged, he devised and sought out new methods

of manufacture. ^x One of his earliest efforts was an ornamented teapot, formed from the ochreous clay of the district. It is still carefully preserved at Burslem, and is known as "Josiah Wedgwood's first teapot."

He next proceeded to the manufacture of ornamental small wares, such as plates, pickle-leaves, knife-hafts, and snuffboxes in imitation of agate, marble, tortoise-shell, and porphyry, ^x which were readily disposed of to the cutlers and hardwaremen of Sheffield and Birmingham. In the preparation of these objects Wedgwood analyzed and made experiments with the various clays of the neighborhood; and he endeavored to find out new methods of coloring them with metallic calces. Indeed, he spent so much time on his experiments that his brother, who was also his master, expostulated with him, and exhorted him to confine himself to the beaten track of the trade. Nevertheless, Josiah continued to pursue his experiments as before. It was not so much that he desired to be original, as that he resolved to pursue his profession to the furthest limits of efficiency and beauty.

While still in his apprenticeship, Josiah's mother died, in 1748, and was laid beside her husband in the churchyard at Burslem, adjoining the pottery works. Josiah, who was now about eighteen years old, continued to live in the same house with his brothers and sisters, who were all older than himself, but Josiah was

the only one of the thirteen children who arrived at any distinction. His brother Richard, who was five years his senior, was a thrower, and had worked in the same room as Josiah ; but, becoming tired of the pottery trade, he left the works and enlisted as a soldier. He went away and never returned to Burslem. It is not altogether surprising that Richard Wedgwood thought he could do as well as a soldier, for the wages paid to young men at the potteries was very small. William Fletcher, who made balls of clay for the two brothers, was paid fourpence a week for the first year, sixpence for the second, and ninepence for the third.

Besides what we have said as to Josiah's progress, comparatively little is known of him during his apprenticeship. Mr. Llewellyn Jewitt, however, says of him : "I have heard it from those best able to know,—from some of the oldest inhabitants of the place,—that in their boyhood, at the end of last century, they were continually admonished by their parents and grandparents to be good, as Wedgwood had been, and to lead such a life as he, as a youth, had done before them. It is pleasant to put this fact on record, and to hear this kind of testimony given to the character of this great man even when young—that he was held up to the youth of his native place as a pattern for emulation."

There is no doubt that during his apprenticeship he contracted a great fondness for his business, and that he followed it through life with an alacrity which rendered it more like an amusement than a matter of labor. He made himself minutely acquainted with all the branches of the then existing art, both of those which had as well as those which had not as yet been introduced into his brother's manufactory. He not only grounded himself in all the chemical and mechanical parts of the potter's art then known, but he showed a desire to extend and develop their application. Even at this early period he made several curious improvements, and produced the first pieces, though only small ones by way of specimen, of the afterward celebrated cream-colored or queen's ware.

To us, who look back on Josiah Wedgwood's successful career in early life, it is surprising that his own family should have failed to recognize the value of his energy and perseverance, and that he should have been driven to seek encouragement for his talents at the hands of strangers. But it must be remembered that at the time when Thomas Wedgwood succeeded to his father's business the pottery trade of Staffordshire was an insignificant manufacture compared with what it became during Josiah's lifetime.

Nor was it any fault of Thomas Wedgwood's that he could not look into the future and fore-

tell the value of his brother's abilities, or foresee the rising tide of success in the pottery trade. He knew the modest but fairly sure lines upon which his ancestors had worked, and he was doubtless influenced by older relatives in the determination he arrived at: not to risk in uncertain ventures the slender provision left to help so large a family out into the world. Josiah was, therefore, informed that he must take his speculative schemes elsewhere, as the family property was not to be placed by him in any sort of jeopardy. X

CHAPTER IV

PARTNERSHIPS WITH HARRISON AND WHIELDON

JOSIAH'S apprenticeship ended in November, 1749. He had now nearly arrived at man's estate. As his brother would not have him for a partner, being greatly opposed to Josiah's "flights of fancy," the latter had to wait for some other opportunity. He was, of course, disappointed, but he was satisfied to wait. His mother having died in the previous year, Thomas was left to maintain her numerous family.

Josiah continued to work with his brother for two years as journeyman, at small wages; but on arriving at maturity he was paid the twenty pounds which had been bequeathed to him by his father. It was a very small capital on which to begin the operations of his life; but with Josiah's skill, energy, and perseverance it proved to be enough.

Wedgwood removed from Burslem to Stoke in 1752, when he was twenty-two years old. He then entered into partnership with John Harrison of Cliffe Bank Pottery, near Stoke-upon-Trent. Harrison, who was not a practical

potter, but had been a tradesman at Newcastle-under-Lyme, supplied the capital, while Wedgwood supplied the brains. The principal wares he made were mottled earthenware, knife-handles in imitation of agate, and various kinds of tortoise-shell and marble. These were mostly sold to hardware makers at Sheffield and Birmingham.

The arrangement did not last very long, for after two years Harrison, who wished to appropriate to himself the larger share of the profits, went out of the firm, and Thomas Whieldon came in. The manufactory had been carried on at the top of Stoke, in what had been Mr. Alferson's pottery. After the separation of Wedgwood and Harrison the latter failed. His cupidity had not served him. Mr. Josiah Spode bought his works at Stoke, pulled them down, and erected cottages in their stead.

Mr. Whieldon, with whom Wedgwood now entered into partnership, was one of the most eminent potters of his day. It was of great advantage to Wedgwood to be connected with a man of so excellent a character and of such superior business habits. Whieldon's works were situated at Fenton Hall, near Stoke. The partnership began in 1754, and was to last for five years. Wedgwood was bound to introduce the secrets of the trade, and to practise them for the benefit of the firm.

One of his principal productions was a new

green earthenware, having the smoothness and appearance of glass. Dessert-services were made of this ware; the plates were moulded in the form of leaves, and were beautifully ornamented.

Wedgwood also made toilet-vessels, snuff-boxes, and other articles colored in imitation of precious stones for mounting on metal. The London jewellers, regarding these articles as entirely original, and the production of some new and valuable discovery, appreciated them accordingly, and sold them in considerable quantities. X

Wedgwood's right leg and knee still tormented him. He was often confined to his room, and quite unable to attend to the business of the manufactory. But the work must necessarily go forward, and as he was the managing partner, and the men must be occupied in manufacturing the earthenware so much in demand, he was under the necessity of revealing the knowledge of his mixtures and glazes to the principal foreman of the works. Thus the secret of his inventions became known, and the production of the green earthenware soon became a general manufacture in the neighborhood. X

Josiah Spode, afterward a distinguished potter, was apprenticed in his boyhood to Whieldon & Wedgwood. In accordance with the low rate of wages which then pre-

vailed he was at first paid 2s. 6d. a week ; and when he became a journeyman, he was paid 7s. a week. The turners and throwers and firers were paid 8s. a week. X
NB

Very few manuscripts are preserved relating to the period of Josiah's partnership with Harrison and Whieldon. There is, however, a small green pocket-book containing memoranda, in Josiah's writing, of orders under the dates 1752-53, from which may be gathered a notion of the wares then produced. These are chiefly of the useful kind, such as blue-flowered cups and saucers ; ash-color, cream-color, or tortoise-shell teapots ; bason bowls, plates, and image toys. There is also in the same notebook a list of debts due in London, and dated 9th April, 1753, amounting to £291 12s. 7d. X

Another set of balance-sheets for the year 1757 is also in existence, which refers only to a portion of the firm's sales ; and it shows a steady increase in business throughout the year. In the month of January the profits are entered at £3 16s. 7d. ; in the month of May they amount to £28 odd ; and in the month of October to £36 odd. The expenses of production are entered on one side of the book, such as clays, coals, wages, saggars, painting, journeys, postage, and such like ; and on the opposite sheet is a list of the tradesmen who bought the ware. X

Among the Wedgwood manuscripts are a series of books, some being rough memoranda

in the handwriting of Josiah Wedgwood, and others fair copies by Mr. Chisholm, in which are recorded a series of Wedgwood's experiments in pottery fabrics. The first volume opens thus: "This suite of experiments was begun at Fenton Hall, in the parish of Stoke-upon-Trent, about the beginning of the year 1759, in my partnership with Mr. Whieldon, for the improvement of our manufacture of earthenware, which at that time stood in great need of it—the demand for our goods decreasing daily, and the trade being universally complained of as being bad and in a declining condition.

"White stoneware (viz., with salt glaze) was the principal article of our manufacture; but this had been made a long time, and the prices were now reduced so low that the potters could not afford to bestow much expense upon it, or make it so good in any respect as the ware would otherwise admit of; and with regard to elegance of form, that was an object very little attended to.

"The article next in consequence to stoneware was an imitation of tortoise-shell, but as no improvement had been made in this branch for several years, the consumer had grown nearly tired of it; and though the price had been lowered from time to time in order to increase the sale, the expedient did not answer, and something new was wanted to give a little spirit to the business.

“I had already made an imitation of agate which was esteemed beautiful, and made a considerable improvement, but people were surfeited with wares of these various colors. These considerations induced me to try for some more solid improvement, as well in the body as the glazes, the colors, and the forms of the articles of our manufacture. I saw the field was spacious, and the soil so good as to promise ample recompense to any one who should labor X diligently in its cultivation.

“In the following experiments I have expressed the materials by *numbers*, which in this instance are a species of shorthand, and saved much writing. They have also the advantage of not being intelligible, without the key, to any person who might happen to take up the book, which is often, in the course of making the experiments, unavoidably exposed to such an accident.”

Then follows the key to the cipher, giving the numbers and letters employed in noting the experiments. These represent the nature and quantity of the materials, the degrees of heat to which they had been exposed, together with miscellaneous observations, conclusions, and hints for further enquiry.

“The degrees of heat,” says Wedgwood, “in my former books were expressed by the different ovens, and the different parts of them where the experiment pieces had been fired in.

G. O. signifies the gloss oven ; *B. O.* the biscuit oven ; *W. O.* the white oven ; and the letters *B. M. T.* prefixed to these mean the bottom, middle, and top of the respective ovens. *T. B. O.* means the highest part of the biscuit oven in which we put ware. It is below the top of the chimneys or flues, called *bags* by the potters ; and *T. T. B. O.* signifies the uppermost sagger of the pile, except the one with which it is covered.

“No other means than the above were at that time known, not only of communicating to any other person, but of preserving to myself, any idea of that very essential circumstance in experiments of this kind : the degree of heat to which the materials were exposed. But having lately invented a thermometer for measuring the higher degrees of heat as far as we can go above ignition, the heats made use of in the several experiments are now expressed in the degrees of that thermometer.”

The first record of experiments bears the date of 15th February, 1759, and continues for several years. They are systematically and minutely set down in the beautiful handwriting of Mr. Chisholm, and would doubtless be of great interest to any scientific potter. Sometimes observations are introduced at the sides of the record, such as : “This merits further trial ; try it again” ; “Colored clays often proved in knife handles” ; “Colors to paint agate on the

outside of the glaze after it is laid on the ware and before it is fired"; "The crucible broke; try it again."

Under the date of 13th February, 1759, at Fenton, Wedgwood writes: "Trial for a blue to lay upon the biscuit-ware along with other colors to imitate agate and tortoise-shell." Again, on the 23d March, 1759, while trying for glazes, he writes: "This is the composition of Bow china, but I am not certain of the proportions." Also: "This is the result of many experiments which I have made in order to introduce a new species of colored ware, to be fired along with the tortoise-shell and agate in our common gloss ovens." He also records, at Fenton, 28th March, 1760: "Trial for a cutting color to trace flower, etc., upon plain biscuit-ware and to bear a lead gloss laid over it." And again: "Trials for red china. Agate paint for spouts and handles to prevent color from running down the teapot; very good results."

In another portion of his record Wedgwood refers to his green glaze, which, he says, "is to be laid on common or cream-color biscuit-ware. This is the ordinary copper-green glaze of the dessert-services." In the remarks column he says: "This is the result of many experiments which I made in order to introduce a new species of colored ware to be fired along with the tortoise-shell- or agate-ware in our common

gloss ovens, to be of an even self color, and laid upon the ware in the form of a colored glaze."

We have been thus particular in recording the early experiments of Wedgwood while a partner with Harrison and Whieldon. They will doubtless be found tedious reading to many, but it is necessary to give the extracts from his record books in order to show the pains which he took, by his early and careful experiments, to revive the pottery trade, then in a state of great depression. They will show that Josiah's future prosperity was not the result of "chance," but of steady and persevering application. Every experiment was carefully recorded. He would not trust to his memory, but only to the written record; and it may be added that the result of his skill and perseverance gradually led to the general improvement of the pottery trade. NB

The five years' partnership with Whieldon expired in 1759, and Wedgwood was then left to his own devices. Whieldon retired from the pottery manufacture with a considerable fortune. He built a handsome house near Stoke, where he long continued to enjoy the fruits of his industry. He was greatly esteemed for his charity and benevolence, was made sheriff of the county of Stafford in 1786, and he died twelve years after at a very advanced age.

CHAPTER V

WEDGWOOD BEGINS BUSINESS FOR HIMSELF

ON the conclusion of his partnership with Whieldon Wedgwood set up for himself a small manufactory at his native village of Burslem, in a pottery known as the Ivy Works. The site of these works is now partly occupied by the Burslem market-place and municipal offices. The exact date of Wedgwood's commencing business on his own account is not known ; but it must have been after the month of March, 1760, as the record of experiments above cited contains an entry dated "Fenton, 28th March, 1760."

However this may be, it is clear that Wedgwood had started in business at Burslem in 1760, and the probability is that he was enabled to do so by means of the savings he had made in the partnership with Whieldon, as well as by the small legacy which he had inherited from his father. He was now thirty years of age. We have seen how careful and observant he had been as a young man, and how desirous he was of advancing the manufacture to which he had devoted himself. Though his means

were inconsiderable, he thought that he might not only make the ends meet, but perhaps he might eventually make a mark during his lifetime in the development of the art of pottery.

The constant pain he had suffered from his injured knee had in many respects been a sore hindrance and disadvantage ; but in curtailing his bodily powers, and keeping him often confined to his bed, it had produced increased activity of mind. He never allowed himself to be idle, and he had read much and thought more.

He borrowed books from his friends, and read them assiduously, especially those which bore upon his favorite art. He also improved himself in arithmetic, geography, and the knowledge of English. Some of the books which he borrowed, especially those upon chemistry and the mixture and combination of clays, he copied in his own hand, for purposes of reference. When he had gained some strength, and found himself sufficiently well to be able to rise and move about, he began a series of experiments with the clays of the neighborhood ; and he thus commenced a course of technical practical education which proved of the greatest value to him in after life.

When he commenced business for himself at Burslem, Wedgwood rented a portion of the Ivy House and works from his distant cousins

John and Thomas Wedgwood. The rental was only £10 a year, the working premises consisting of two kilns, a few tile-covered sheds and rooms, and the adjoining ivy-covered cottage. NR

Among the hands whom he employed was his second cousin, Thomas Wedgwood, who was engaged as a journeyman for five years at the wages of £22 a year, or at the rate of about 8s. 6d. a week. Thomas had been a potter at the Worcester works, and brought with him the knowledge of the art which he had acquired at that important manufactory. X

Wedgwood had other workmen, though they were comparatively few in number. Indeed, he had considerable difficulty with these workmen, who were wedded to their old ways, and could scarcely be brought into conformity with their new master's modes of workmanship. It was only by his own personal influence that Wedgwood succeeded in moulding them to his own methods, for he himself conducted in person the production of every article that proceeded from his works. He made his own models, superintended the firing of the ware, and was constantly employed in the various departments of the pottery manufacture. In doing so he overcame to a large extent the trammels of his bodily afflictions. X

At first he devoted himself more particularly to the ordinary classes of ware which formed

the staple productions of the district. But by carefulness in the manufacture he gradually acquired a reputation which led to a considerable increase in his trade. He continued also to make his green-glazed ware, his tortoise-shell and tinted snuffboxes, his perforated dessert-plates, which soon obtained considerable celebrity. He introduced his white medallions, in which he eventually achieved great celebrity, and began to ornament his ware with flowers and foliage, sometimes gilt and sometimes colored, always striving at something new and original.

He prided himself upon his own specially designed tea-services, in which the different vessels were formed and colored to represent joints and vegetables, just as Bernard Palissy had done in France at an early period of his earthenware manufacture. These novelties proved so attractive that they had a very large sale; and the other pottery manufacturers—always watching with interest the new designs of Wedgwood—at once imitated them, and they very soon led to a large increase in the trade of the district. Wedgwood also began his works in relief, such as storks fishing, or ducks casting water into a fountain from their bills, and many other devices.

His connection and reputation rapidly increasing, he found it necessary to increase his establishment, and to employ additional hands.

He hired some new works and furnaces not far from the Ivy House, on the site now partly occupied by the Wedgwood Institute. As his health improved, he was able to devote himself more zealously to his rapidly growing enterprises. The landlord of his new premises was Mr. John Bourne, and Wedgwood continued to be his tenant until his removal from Burslem.

The new premises were called the Brickhouse Works, though they were afterward known among the workmen as the Bell Works. The reason of this sobriquet was as follows: The potters had been summoned to their labors by sounding a blast on a cow's horn. The sound did not travel very far; and the workmen used to loiter lazily into the works just as they pleased, every thing apparently going on in a very indifferent manner. But Wedgwood adopted a better plan. He erected a cupola containing a loud bell, the sound of which travelled very far, and thus the working-people were called more rapidly together.

One of Wedgwood's principal difficulties, as with all employers in those days, was the management and discipline of his workmen. They were irregular in their habits, disposed to be lazy, and there was a consequent want of order in the work-rooms. Their drunkenness was one of the greatest difficulties he had to contend against. But Wedgwood had infinite patience. He made himself the workmen's

friend in many ways. He counselled them to save their earnings for the benefit of themselves and their families. By slow degrees he won their gratitude and affection. He enlightened their judgment, and the wisest of them became his best friends. One of his best arguments was the success of his undertakings. The men saw his fresh enterprises turning into gold, and they were not likely to hinder what was obviously to their advantage as well as his own. Thus order and discipline at length prevailed in the management of the works.

At the period when Wedgwood began business for himself the workmanship of the potters was in a very low condition as to style. The machinery used consisted mainly of the potter's wheel and the common turning-lathe; while the chief tools used were little better than a few cutting-knives. Wedgwood, with his nicety of feeling, and his determination to do every piece of work in the best possible manner, introduced many new tools and appliances. He instructed his men individually in their use, and sought to form them, as it were, after his own model. He taught them the use of the new tools, and personally superintended every thing, from the clay on the wheel to the final firing and decoration of the ware. His workmen had been brought up on the old lines, making rude pottery, with insufficient appliances. Compare the refinement of mate-

NB

rials, the delicate accuracy of form, and the soft texture of one of Wedgwood's queen's-ware pieces with the rough pansion-mug wares generally in vogue when he commenced his operations, and it will at once be apparent that vast strides had been made among his work-people while passing from the old style to the new.

One of Wedgwood's greatest difficulties was in constructing his firing-kilns. Repeated failures were most disheartening, and he was almost as much distressed as Bernard Palissy was in his search for the enamel, though he did not, like him, require to burn up his furniture in order to keep his furnaces in sufficient heat. The precarious activity of fire, and the inequality of its force, even in different parts of the same kiln, are formidable impediments. Common wares admit of considerable latitude in the heat, and in an established manufactory experience enables an attentive workman to regulate the fire pretty successfully.

But in wares of an improved kind this cannot be done. In all the porcelains and fine wares, whose qualities depend essentially upon a certain degree of semi-vitrification, the hazard is very great. Even in the heat that is just sufficient for the perfection of the ware it receives such a softness and flexibility that large vessels, necessary for the use of the dining-table, bend and alter their form in the

kiln by their own weight, and a little increase of fire runs the whole into a vitreous mass.

When Wedgwood began to make fine ware for the table, his repeated failures with his furnaces were most disastrous. The labor and expense of a month were destroyed in a few hours. One kiln had to be pulled down, and another built up; the new one also found defective, from circumstances which could not have been foreseen; the correction of an error in one quarter followed by another elsewhere. Yet he conquered by dint of observation and experience—after losing much money, time, and labor, it is true; but he would not be balked. The improvement of pottery became his passion; and at length success crowned his indomitable efforts.

He spent his evenings, and a considerable portion of his nights, in scheming and designing the works of the succeeding day. Like Napoleon, he held that nothing was "impossible." After contriving every thing he declared that it "must be done," let what might stand in the way. His workmen began to believe in him; and eventually succeeded in fulfilling his strongly desired objects. They helped him with his kilns, his drying-pans, his tools, and the other apparatus which he contrived from time to time, to carry out the improvements in his new manufactures. His decision of mind was ready to encounter and overcome any situ-

ation of difficulty, while his indomitable perseverance and unfailing resource communicated themselves to his subordinates and inspired them with a genuine interest in their work.

But it was not his evenings only that occupied his mind with designing and contriving the methods of work for the ensuing day. He contracted a habit of thinking during the night over all that had occurred during the day that had passed, and of all that he had to accomplish in the coming day—his kilns, his tools, his wares, or his models. He usually surmounted his difficulties before the return of the morning, when he was up and ready to go on with his labors. When his friend Brindley, the engineer, had a difficult problem to solve, he lay in bed for one, two, or even three days, until he had effectually designed his plan, and then he would rise and carry out his work, from memory only; but Wedgwood could not leave his workmen for days together. He must rise, proceed to the works, and superintend their daily operations.

But he felt the inconvenience of this custom of thinking during the night in the advanced period of his life; because if any matter of business occupied his mind before he went to rest, it was sure to deprive him of sleep for the greater part of the night. Wedgwood had always a very active mind; but this activity eventually proved an obstacle to his bodily

health, which was never very robust or vigorous.

One of Wedgwood's early friends was Matthew Boulton of Soho, near Birmingham. Wedgwood was accustomed to supply Boulton with vases, snuffboxes, and other articles to be mounted by the mechanics of Birmingham, and made ready for the market. On one occasion Boulton wrote to Wedgwood that he admired his vases so much that he "almost wished to be a potter"; but he was satisfied with mounting in metal the vases which Wedgwood had made.

Boulton was a man of great practical genius, as well as an excellent organizer. By his skill and energy he had completed and organized a splendid manufactory at Soho, which was the admiration of every man of business. Wedgwood, knowing this, had consulted Boulton as to the management of his own rapidly extending business, not only at Burslem, but afterward at Etruria; and the two became, as will afterward be seen, exceedingly intimate friends and correspondents.

With every day's reflection and experience Wedgwood's industry, energy, and taste improved. His great ambition was to rival the works of the Etruscans and to raise the Staffordshire potters' art far above the then standard of excellence, and to rival not only the costly earthenware of foreign countries, but that of long past ages. Hence the extreme skill, intel-

ligence, and taste which he brought to bear upon every branch of his native and favorite art.

It was not merely in objects of taste that Wedgwood endeavored to excel, but also in objects of common use. It was at the Bell Works that he turned his attention more especially to the fine and delicate descriptions of earthenware which shortly after earned for him the proud distinction of "Queen's Potter." The results of his close and incessant occupation, and of his endless experiments as to the properties of clays, kaolin, carbonate of barytes, and such like, led to the production of many marvellous kinds of ware, and to the beauty of finish which characterized them, such as are to be rarely equalled at the present day.

Mr. Gladstone truly said, in his *éloge* of Wedgwood at Burslem, that his specialty lay in the adaptation of every object to its proper end. "His most signal and characteristic merit lay in the firmness and fulness with which he perceived the true law of what we term Industrial Art, or, in other words, of the application of the higher Art to Industry; the law which teaches us to aim first at giving to every object the greatest possible degree of fitness and convenience for its purpose, and next at making it the vehicle of the highest degree of Beauty which, compatibly with that of fitness and convenience, it will bear; which does not sub-

stitute the secondary for the primary end, but which recognizes, as part of the business of production, the study to harmonize the two. To have a strong grasp of the principle, and to work it out to its results in the details of a vast and varied manufacture, is a praise high enough for any man at any time and at any place. But it was higher and more peculiar, as I think, in the case of Wedgwood than in almost any other case it could be. For that truth of Art, which he saw so clearly, and which lies at the root of excellence, was one of which England, his country, has not usually had a perception at all corresponding in strength and fulness with her other rare endowments. She has long taken a lead among the nations of Europe for the cheapness of her manufactures: not so for their beauty. And if the day shall ever come when she shall be as eminent in true taste as she is now in economy of production, my belief is that that result will probably be due to no other single man in so great a degree as to Wedgwood.”*

Though Wedgwood's time was almost fully occupied with his own concerns, he yet found leisure to attend to the improvement of the roads leading to and from Burslem, which were then in a villanous condition. It was before the days of Macadam, and the hollow lanes

* “Wedgwood: an Address,” by the Right Honorable W. E. Gladstone.

were narrow, tortuous, miry, and in all ways abominable. Stones were thrown in by passers-by at the deepest places ; but there was no such thing as local superintendence. The trade of the district, it is true, was not very great ; but, under the influence of Wedgwood, it was rapidly increasing. The population of the pottery districts was only about seven thousand in 1760, the year when Wedgwood began business on his own account ; but the growing and expanding trade could only be encouraged by improving the condition of the roads and by-ways.

The principal materials used in the manufacture of the best kinds of pottery were brought from considerable distances ; flint stones from the south-eastern parts of England, and the best kinds of porcelain clay from Devonshire and Cornwall. The flints were brought by sea to Hull, and the finer clay to Liverpool. Considerable quantities of clay were also conveyed in boats up the Severn to Bridgnorth and Bewdley, whence the materials were conveyed, chiefly on pack-horses, to the villages in the potteries, where they were worked up into earthenware.

The manufactured articles were returned for consumption and export in the same rude manner. Crates of earthenware were slung across the backs of horses or donkeys, and sent off to their respective destinations. They were sub-

ject to breakage and pilferage ; and often the poor brutes fell down in the miry and narrow ways, and a whole crateful of ware was smashed. Even when the ware reached its destination, the cost of transport was very heavy. The lowest charge was eight shillings a ton for ten miles. The result of this difficulty of transporting the ware was to restrict in an immense degree the distribution and consumption of the lower-priced articles in common use. The same obstacles prevented the conveyance of salt, an indispensable article, which reached almost a fabulous price by the time it was sold some two or three counties distant. All other articles of consumption,—woollen, corn, coal, lime, and ironstone,—were conveyed in the same way, on the backs of pack-horses, and thus living was rendered very expensive, and agriculture and industry of all kinds were seriously impeded and hindered. NB

This great evil of the want of road communication weighed heavily not only upon the industry, but upon the civilization of the district ; and this fact, recognized by Wedgwood at an early period of his career, drew his attention to the state of the highways. He took the leading part in promoting an application to Parliament for powers to repair and widen the road from the Red Bull at Lawton in Cheshire to the Cliffe Bank in Staffordshire. Such a line of road, if formed, would run right through the X NB

centre of the potteries, and fall at either end into a turnpike road.

The bill was not, however, obtained without considerable difficulty. It was violently opposed by the inhabitants of Newcastle-under-Lyme, on the ground that the proposed new road would enable the pack-horses and carts to travel north and south without passing through their town. The public-house keepers acted as if they had a vested interest in the atrocious badness of the roads and lanes. Their business would be destroyed, and hence they opposed the bill. The bill was passed in a modified form whereby the road was curtailed at the south end, and stopped short at Burslem. This was, no doubt, something gained, but it was not enough; and through communication must be established in some way between the north and south. It was not until the Grand Trunk Canal was projected,—in the promotion of which Wedgwood took a leading part,—that he was able to carry out his intentions to the fullest extent. But the description of this great enterprise is reserved to a succeeding chapter.

CHAPTER VI

IMPROVEMENT OF WARE—FRIENDSHIP WITH BENTLEY

WEDGWOOD continued to improve his useful ware with his usual insight and perseverance. His most important manufacture was his cream ware, which was greatly in demand. He improved its body, its glaze, and its form, and was indefatigable in his efforts to obtain the best specimens of Eastern and Continental ware as models for imitation, as well as to improve their form and ornamentation.

It is hardly to be wondered at that he paid the penalty of most original minds, and that his products were imitated by Boulton of Soho and by other workers in metal. They were sought for with eagerness by the porcelain manufacturers on the Continent, and were even sent to China as patterns for the potters there. Wedgwood did not approve of this exportation; he was of opinion that if the Oriental porcelain was made in forms better suited for European tables, it would materially injure the sale of English earthenware in home as well as foreign markets.

About this time Wedgwood adapted that curious machine the engine lathe for the improvement of pottery. Before his time the potter's lathe was very primitive in its construction; it was merely used for paring down any inequalities of surface. Wedgwood's attention was first drawn to the engine lathe by Plumier's "L'Art du Tourneur"; he had the book translated for him. The machine had hitherto been employed for turning in wood, ivory, and metal. The possessor of one in London refused to admit Wedgwood for a few minutes where one of them was at work without payment of five guineas.

This, however, was not sufficient. Wedgwood had the good fortune to meet with the celebrated Mr. Taylor of Birmingham, who had made the lathe instrumental in greatly improving various branches of metallic manufactures. Wedgwood and he had many conferences together, and the Burslem potter profited greatly by Taylor's mastery in practical detail. The latter undertook to make a machine turning-lathe for Wedgwood, who was so ardent in the business that he would not quit the place until he had got the machine finished; and he brought it home with him, together with a person instructed in the manner of using it. This was in the year 1763. Under Wedgwood's hands this machine became a most important tool. His first application of it was to the red

porcelain, which, being of a close texture and without glaze, was well suited to receive and retain a sharpness in the work. He afterward applied it to decorate the vases which he made in queen's ware.

In the same year (1763) Wedgwood invented a species of earthenware for the table of a fine and durable body, covered with a rich and brilliant glaze, and able to bear sudden vicissitudes of heat and cold without injury. As it was manufactured with ease and expedition, it was sold cheap; and as it possessed, with the novelty of its appearance, every requisite quality for the purposes intended, it came quickly into general estimation and use. To this manufacture the queen was pleased to give her name and patronage, commanding it to be called "Queen's Ware," and honoring the inventor by appointing him her Majesty's potter. The ware is composed of the whitest clays from Dorset, Devon, Cornwall, and other places, mixed with a due proportion of ground flint. The pieces are fired twice, and the glaze is applied after the first firing, in the same manner as on porcelain. The glaze is a vitreous composition of flint and other white earthy bodies, with an addition of white lead for the flux, analogous to common flint glass; so that when prepared in perfection the vase may be considered as covered over with real flint glass. "The compound," says the author of the "Art of

NB

Pottery," "being mixed with water to a proper consistence, the pieces after the first firing are separately dipped in it. Being somewhat bibulous, they drink in a quantity of mere water; and the powder which was united with that portion of the water remains adherent uniformly all over their surface, so as to become, by the second firing, a coat of perfect glass."

In order to supply the increasing demand for his wares Wedgwood opened an office in London, and appointed his elder brother John to conduct the business. He had also an agent in Liverpool, to whom the flints and clay from Dorset and Devon were consigned, and who also superintended the export of Wedgwood's manufactured ware to foreign countries, especially to North America, where he found a rapidly increasing market. Wedgwood had occasionally to visit Liverpool in order to see his agent, and inspect the import and export of his goods. NBX

While at Liverpool on one occasion he became aware of a device recently invented there by which the decoration of his cream ware might be greatly improved. The history of this accidental invention may be thus briefly stated: Mr. John Sadler had commenced business as a printer at Liverpool in 1743, and it is said that the first idea of applying the art of printing to the manufacture of pottery occurred to him when seeing some children sticking waste NB

prints upon their dolls' houses. He adopted the same method, fired some pottery, and found the prints burned into the ware. The application of this discovery led to a partnership between Sadler and Green, and they took steps for taking out a patent.

It is not known at what date they became acquainted with Wedgwood, but it is certain that they were in active business communication with him in 1761-62. The system pursued was that Wedgwood forwarded by carrier to the partners' print-works at Liverpool a large quantity of his cream-colored pottery, which they bought from him out and out; and they subsequently resold it to him after they had decorated the ware with their transfer designs. This complicated mode of procedure could not go on for long, and at length Wedgwood bought the right of making the transfers about the year 1763. NB

One of Sadler's letters to Wedgwood, dated 27th March, 1763, shows that he possessed some knowledge of his art. "We have now," he said, "which you have not seen, a fine landscape, a new Queen, a Mason's Arms, with Pitt and Granby engraved on paper for the quarto. . . . A landscape, for instance, has the foreground very strong, buildings and distance a little lighter." After Wedgwood was able to transfer the engravings to his ware his name found its way into some of the political lam-

poons and squibs which the wits of the day threw off unmercifully at the leading members of the government. One of them, alluding to spittoons and other vessels bearing the head of William Pitt,* is to be found in the "Asylum for Fugitive Pieces," got together by John Almon, where an irregular ode, said to be by Edward, Lord Thurlow, afterward Lord High Chancellor of Great Britain, is contained :

"Lo ! Wedgwood, too, waves his Pitt-pots on high !
 Lo ! the points where the bottoms, yet dry,
 The visage immaculate bear !
 Be Wedgwood d——d, and double d——d his ware.

"I am told that a scoundrel of a potter, one Mr. Wedgwood, is making 10,000 spitting-pots, and other vile utensils, with a figure of Mr. Pitt in the bottom. Round the head is to be a motto :

We will spit
 On Mr. Pitt,

and other such d——d rhymes suited to the uses of the different vessels."

In the midst of all these occupations and growing responsibilities Wedgwood was incessantly tormented by the old and incurable ailment in his knee, which had never left him

*This must have been in 1763, when Pitt was virtually Prime Minister, and before he was created Earl of Chatham. Thurlow was then in opposition, but was afterward appointed Lord High Chancellor in 1778.

since his attack of small-pox. Though a most active man, he was always distressed when moving about. A skilful surgeon was called in, and applied some sedative poultices; but the relief given proved only temporary.

At length Wedgwood, notwithstanding the pain which it caused him, felt that he must make one of his journeys to Liverpool. He set out on horseback, but while passing through one of the narrow lanes his knee was crushed while trying to avoid one of the wheels of a cart coming from the opposite direction. He nevertheless rode on to Liverpool, but when he arrived there, although scarcely able to stand, he somehow contrived, with help, to stumble up to his bedroom. Inflammation set in, and threatened a prolonged illness. A surgeon was sent for, and after giving him some relief, and reducing the inflammation, ordered him to remain in bed. This enforced inactivity was a sore trial to one who anxiously desired to be at Burslem looking after his various works and workmen.

Dr. Turner, who attended Wedgwood, was himself a man of accomplishments. Besides being a good surgeon, he was an excellent chemist, a classical scholar, and a man of artistic taste. His interest in his patient led him, when he had sufficiently recovered, to bring to his room and introduce to him many of his own personal friends. Among those who were thus

introduced to Wedgwood was a gentleman of much intelligence, an excellent conversationist, and of a most agreeable manner. This was Thomas Bentley, then a Liverpool agent and merchant, who had travelled on the Continent, and knew many foreign languages, especially French and Italian. On his return to England he settled at Liverpool, and married Hannah Oates, but she died within two years, and her elder sister managed Bentley's household. Eventually he took Mr. James Boardman as a partner into his firm. Wedgwood was attracted by him from the first. Their acquaintance ripened into friendship, then into brotherly affection. Wedgwood envied Bentley's remarkable powers—his knowledge, his intellect, and his artistic attainments.

Bentley visited Wedgwood as long as he remained at the Dale Street Inn in Liverpool. He cheered him up and endeavored to console him for his temporary loss of liberty. They used the pipe of peace and smoked together. They talked about science, religion, politics, pottery, the improvement of the roads and canals, and, indeed, upon all manner of subjects. Even poetry was not neglected. Bentley was a great admirer of Thomson's poems, and infected Wedgwood with his love of nature, and especially with his poem on "Liberty." Bentley was himself of a literary turn, and had contributed articles to the *Gentleman's Maga-*

zine and the *Monthly Review*. He had written out an essay on "Female Education," still in manuscript, part of which he read aloud, to the infinite satisfaction of his friend the master potter.

So soon as Wedgwood could move about with the help of his crutches, Bentley introduced him to some of his more intimate friends—to the Heywoods, always a potent name in Liverpool; to Dr. Priestley, then residing at Warrington; to Dr. Aikin and his accomplished and beautiful daughter Letitia, afterward Mrs. Barbauld; to the Seddons, the Percivals, and the Eyes, with other notabilities of Liverpool.

In due course Wedgwood was able to travel; he returned to Burslem in a chaise, the roads being now sufficiently improved to allow him to travel by that means of conveyance. Then his correspondence with Bentley began, and it lasted as long as Bentley lived. The two unbosomed themselves to each other. Their hearts beat in unison. Every thought that passed through their minds was set down in writing, and duly communicated by post. Their friendship and affection grew rapidly. Every sorrow and joy, every difficulty and success, were imparted to each other with manly frankness.

The first letter that Wedgwood wrote to Bentley on his arrival at Burslem was the fol-

lowing (15th May, 1762) : "There is not a day that passes but I reflect with a pleasing gratitude upon the many kind offices I received in my confinement in your hospitable town. My good doctor, and you in particular, have my warmest gratitude for the share you both had in promoting my recovery, and I know he is too well acquainted with the influence of a good flow of spirits upon the whole animal economy to refuse you your share of merit in this instance."

Among other things that occurred during Wedgwood's stay in Liverpool was the appointment of Bentley as Wedgwood's agent, to superintend the arrival of the potter's material for conveyance to Burslem, and the export of his wares to foreign countries. Hence the letters between them are full of instruction and advice as to the business in hand. Every letter was full of gratitude and hearty friendship. As we shall afterward see from their correspondence, this intercourse was honorable to both ; and perhaps there is nothing finer in commercial communications than the warm and cordial intercourse between these two memorable men. NB

Wedgwood was very busy after his return to Burslem. There were long arrears of correspondence to overtake, there were still many orders to execute, and in their fulfilment Wedgwood's presence was quite indispensable.

There were the experiments on various clays to continue with a view to further improvement, and there were all manner of chemical analyses to pursue in order to test the knowledge he had acquired at Liverpool. He could not leave Burslem even for a day. To his friend Bentley he wrote: "I am tied down to this rugged pot-making spot of earth, and cannot leave at present without suffering for it."

Wedgwood took no important step without consulting Bentley, who on his side was always ready to reply to him with confidence and zeal. He many times visited Burslem, and Wedgwood returned his visits to Liverpool. At length he insisted on Bentley becoming his partner. On removing his works from Burslem Wedgwood built a house for Bentley's accommodation. But Bentley never occupied it, as his services were found to be more valuable in London, the most important centre of Wedgwood's business arrangements. X

CHAPTER VII

WEDGWOOD'S MARRIAGE

WEDGWOOD had arrived at the age of thirty-four before he united himself to a woman who was well worthy of his noble character. Yet he had long loved her. The lady was Sarah Wedgwood, daughter of Richard Wedgwood, who had settled at Spen Green, in Cheshire, and made a considerable fortune as a cheese-factor. Richard had two children, a son and a daughter. The son died early, and the daughter became his heiress.

The families were remotely connected. Richard occasionally visited Burslem, taking his daughter on a pillion behind him after the old fashion. His purpose on those occasions was to see his brothers, the sons of Aaron Wedgwood of the Big House. Thus the acquaintance of Josiah and Sarah began, and grew until it became a true love affair.

The young lady had received an excellent education. She was agreeable, cheerful, handsome, and beautiful. No wonder that Josiah was attracted by her, not only by her personal appearance, but by her keen and accurate judg-

ment, and her propriety in word, thought, and deed. She was one of those happily constituted women who can rise to superior fortune, as well as adorn the ordinary domestic life to which she had been born. She was still her father's housekeeper, looking after his comfort, and filling up her spare time with the spinning-wheel, which she used with skill.

Wedgwood was now in a prosperous condition, and the father of the young lady had no objections to his engagement with his daughter. They corresponded with each other, and Wedgwood occasionally visited her on his way to and from Liverpool. Their courtship, however, was weary work, and Wedgwood longed eagerly for the day when he could bring his "dear Sally" to the home he had prepared for her.

The father was very particular as to the terms and conditions of his daughter's marriage. Wedgwood wrote to Bentley as follows on the 9th of January, 1764 :

"MY DEAR FRIEND : I would have acknowledged the receipt of your very kind letter before now, but hoped by waiting a post or two to be able either to let you know of my happiness or at least of the time when I expected to be made so ; but, oh, grief of griefs, that pleasure is still denied me, and I cannot bear to keep my friend in suspense any longer, though

I own myself somewhat ashamed and greatly mortified to be still kept at bay from those exalted pleasures you have often told me of—and I am very willing to believe—which attend the married state.

“If you know my temper and sentiments on these affairs, you will be sensible how I am mortified when I tell you I have gone through a long series of bargain-making, of settlements, reversions, provisions, and so on. ‘Gone through it,’ did I say? Would to Hymen that I had! No! I am still in the attorney’s hands, from which I hope it is no harm to pray, ‘Good Lord, deliver me!’ Miss W. and I are perfectly agreed, and would settle the whole affair in three lines and in as many minutes; but our papa, over-careful of his daughter’s interest, would by some demands which I cannot comply with go near to separate us if we were not better determined. On Friday next Mr. W. and I are to meet in great form, with each of us our attorney, which I hope will prove conclusive. You shall then hear further from

“Your obliged and very affectionate friend,

“JOSIAH WEDGWOOD.”

Again he wrote to the same correspondent, 23d January, 1764: “All matters being amicably settled between my papa (elect) and myself, I yesterday prevailed upon my dear girl to name the day, the blissful day, when she will

reward all my faithful services. . . In three words, we are to be married on Wednesday next. On that auspicious day think it no sin to wash your philosophic evening pipe with a glass or two extraordinary, to hail your friend and wish him good speed into the realms of matrimony. Adieu, my dear friend! I am very busy to-day, in order that no business may intrude on my pleasures for the rest of the week. Can you write two letters of congratulation on one joyful occasion?"

The long-awaited marriage took place at the parish church of Astbury, in the county of Chester, on the 29th of January, 1764. Four months later Wedgwood wrote to Bentley: "Accept the best respects of two married lovers, who are as happy as this world can make them." The marriage indeed proved a very happy one. Sarah Wedgwood was one of the tenderest and best of wives. She was a woman of whom any husband might well be proud. She was beautiful and gentle, and the two loved each other with depth and fidelity. Her mind unfolded itself leaf by leaf in the society of her husband, always displaying new sweetness.

She was not only tender, but helpful. The rectitude of her mind was intuitive. Though gentle, she was active and strong. While Wedgwood was ill, as he often was through the pain in his diseased knee, she was his

devoted nurse. None other cherished and helped him in his anguish as she did; and this continued until the amputation of his leg some four years after their marriage.

During Wedgwood's occasional illnesses she learned his system of cipher or shorthand, took down notes of his thoughts and ideas, and conducted his correspondence. What a noble wife she was! Her time was too useful now to be occupied in spinning, and her spinning-wheel was banished to the garret. Other domestic and maternal duties occupied her attention henceforth.

In January, 1765, Mrs. Wedgwood became the mother of a girl baby. Writing to her brother Tom in London, who was ill of a cold, but was earnestly invited to come down to Staffordshire with his wife for the benefit of his health, Wedgwood said: "We have now got a pretty employment for you. Sukey is a fine sprightly lass, and will bear a good deal of dandling. You can sing 'lullaby-baby' while I rock the cradle. But I shall hardly find time for nursing, as we have another turnpike broken out among us here, betwixt Leek and Newcastle, and they have *vi et armis* mounted me upon my hobby-horse again, and a prancing rogue he is at present."

Wedgwood was at this time one of the busiest men in the kingdom. He was especially active in the promotion and construction of turnpike

roads, so as to open up the pottery district to the world at large. Besides the road between Leek and Newcastle, there were others between Uttoxeter and Burslem, and Buxton and Bake-well, toward the construction of which Wedgwood offered to subscribe. He was also busily engaged with a still more important subject, the arrangements preparatory to the survey and construction of the Grand Trunk Canal. He had numerous conferences with Lord Gower, the chairman, and Mr. Brindley, the engineer of the canal. After the scheme was launched and subscriptions were required Wedgwood was appointed treasurer. NB

Meanwhile the duties of his own business were increasing, and he was very much occupied with the engine lathe, so as to adapt it to the improvement of the pottery manufacture. He had, as we have said, obtained a copy of Plumier's work entitled "L'Art du Tourneur." He could understand the diagrams, but it was also necessary to understand the words which described them. He accordingly wrote to his friend Bentley, 28th May, 1764, as follows :

"I have sent you a sample of our hobby-horse [engine-turning], which, if Miss Oates [Bentley's sister] will make use of, she will do me honor. This branch hath cost me a great deal of time and thought, and will cost me more. I am afraid some of my best friends will hardly escape. I have got an excellent

book on the subject in French and Latin. I have enclosed one chapter, which, if you can get translated for me, it will oblige me much, and I will pay any expense attending it."

On another occasion, when Wedgwood was engaged in superintending the construction of his new works on the property he had purchased, he wrote to Bentley: "I scarcely know, without a good deal of recollection, whether I am a landed gentleman, an engineer, or a potter; for, indeed, I am all three, and many other characters by turns. Pray Heaven I may settle to something in earnest at last."

His principal business, of course, was a potter. He was constantly engaged in making experiments on clay and the materials of glaze, for the purpose of holding his ground and improving his manufacture. To his brother John in London he wrote: "I have just begun a course of experiments for a white body and glaze, which promiseth well. Sally is my chief help in this as well as other things, and that she may not be hurried by having too many irons in the fire I have ordered the spinning-wheel into the lumber-room. . . I do not intend to make this ware at Burslem, and am therefore looking out for an agreeable and convenient situation elsewhere."

On 2d March, 1765, Wedgwood took the opportunity of informing Sir William Meredith, who had sent him some elegant vases to

imitate, with many other specimens of ancient pottery, of his operations. The bulk of the manufactures at Burslem were exported to foreign markets; for the home consumption was very trifling in comparison to that which was sent abroad. The principal markets were on the Continent and in North America. To the Continent he sent an amazing quantity of ordinary white stoneware, as well as some of the finer kinds. He was afraid that the trade to the colonies would soon be lost, as pot-works were already being established there. X
NB

“They have at this time,” said Wedgwood to Meredith, “an agent among us hiring a number of our hands for establishing new pot-works in South Carolina, having got one of our insolvent master potters to conduct them. They have every material there equal, if not superior, to our own for carrying on the manufacture. Therefore we cannot help apprehending the untoward consequences to our own home commerce.”

Wedgwood continued to make many improvements in his manufactures. In 1766 he introduced the black ware, the jasper- and cane-ware; and was making experiments upon mortars for chemists and druggists, in which he eventually succeeded, and did a very extensive business in that material.

CHAPTER VIII

WEDGWOOD APPOINTED QUEEN'S POTTER

IN the course of Wedgwood's business connected with the construction of the Grand Trunk Canal he had frequent opportunities of meeting the Duke of Bridgewater, the proprietor of the Bridgewater Canal between Manchester and Liverpool. On the 6th of July, 1765, he wrote to John Wedgwood, then his London agent, as follows :

“I have been waiting upon his Grace the Duke of Bridgewater with plans respecting inland navigation. Mr. Sparrow went along with me. We were most graciously received ; we spent about eight hours in his Grace's company, and had all the assurances of his concurrence in our designs that we could wish. His Grace gave me an order for the completest set of table-service of cream-color that I could make. He showed us a Roman urn, fifteen hundred years old at least, made of red china, which had been found by his workmen in Castle Field, near Manchester. After his Grace had dismissed us we had the honor and pleasure of sailing on his gondola some nine

miles along his canal, through a most delightful vale, to Manchester. The next day we waited upon the Cheshire gentlemen at a meeting of the Commissioners for the Weaver Navigation at Northwick. They also promised to use their interest in favor of our design, provided we fell into their navigation."

Thus Wedgwood was fully occupied not only with executing his orders for cream ware, but with his exertions to open up the navigation of the country by means of the Grand Trunk Canal. At the same time the manufacture of pottery occupied the greatest share of his attention, inasmuch as it was by that occupation that he lived and flourished, and employed so large a number of working-people in his neighborhood.

It was a matter of great satisfaction to him to be employed to make the completest service of cream-color ware for the Duke of Bridgewater; but his principal object was to be employed by the highest people in England—their Majesties the king and queen, and the royal family. George III. succeeded to the British throne in 1760, and in the following year he married the Princess Charlotte of Mecklenburg-Strelitz.

Their Majesties were great friends of British manufactures, and anxiously desired to patronize its principal promoters. It is not improbable that the queen was first induced to order a cream service from Wedgwood through the

instrumentality of the Honorable Deborah Chetwynd, one of her Majesty's maids of honor. She was a Staffordshire lady, daughter of the Master of the Mint, W. R. Chetwynd, afterward Viscount Chetwynd. Miss Chetwynd was proud of the rising fame of her countryman, Wedgwood. She knew of his intimate connection with Lord Gower of Trentham, the Duke of Bridgewater, the Egertons, the De Greys, and other noblemen; and, being herself a lady of taste and judgment, she took the opportunity of recommending Wedgwood's ware to the patronage of the queen.

The first royal order that Wedgwood received came through Miss Deborah Chetwynd. It was a complete tea-service in cream ware, decorated with green and gold. Wedgwood wrote to his brother in London, requesting him to wait upon Miss Chetwynd and obtain her further instructions as to the manufacture and decoration of the service.

"I am much obliged to you," he said (6th July, 1765), "for your good offices with Miss Chetwynd. You may be sure my best endeavors will not be wanting to make the articles she orders as complete and elegant as possible; but suppose we fail in burning the gold on, must we in that case stove it on, and make the ware green withinside? Must the saucers and other articles be gilt any further on the outside than from the top edge to the foot?"

“I shall be very proud of the honor of sending a box of patterns to the queen, among which I intend sending two sets of vases, cream-colored, engine-turned, and printed, for which purpose nothing could be more suitable than some copper plates I have by me. I can adapt the vases so that the designs will appear to be made for each other and intended for royalty, nor must you trust to the contrary. But I am one group or design short, which I have sketched out and enclose, and desire you get it done by Wale, unless you know a better hand.”

Wedgwood was most careful in his execution of this first royal order. He himself superintended the whole proceeding, the burning in of the gold and the illumination of the borders with flowers. In his early years, while passing across the moors to school at Newcastle, he had observed with delight the wild-flowers which grew upon the waste ground, and vividly remembered them. As in the case of many a successful man, his early intimacy with nature developed his talent for keen observation, and the faculty which he had cultivated from the beginning of his life for *taking pains* in all that he did became his strongest discipline, and eventually led to his remarkable conquest over all his difficulties and misfortunes.

He had indeed many troubles at this time. One of the greatest was the incompetence of

his workmen. "I am just teased out of my life," he wrote to his brother in London, "with dilatory, drunken, idle, worthless workmen; they prevent my proceeding with the tea-service, to which more sorts of workmen are necessary than one would imagine." The uncertain element of fire was, as has already been stated, a serious obstacle. This is one of the enemies which the potter has to encounter and overcome. If not helped by the assiduity of his workmen, he is put to constant anxiety and expense. Sometimes the labor of a month is destroyed in an hour. The kiln has to be pulled down, and another erected in its stead. That, too, may be found imperfect, and has to be altered at a considerable loss.

Yet Wedgwood's troubles were to a considerable extent alleviated by his many encouragements. "I have just had the honor," he said (7th August, 1765), "of a visit from the Duke of Marlborough, Lord Gower, Lord Spencer, and others, over my works. They seem much interested and pleased, and wonder that I have not a warehouse in London where patterns of all the sorts I make may be seen." Indeed, Wedgwood's works were an institution in the county; and men of the highest rank were proud of his industry and enterprise.

The queen was greatly pleased with the breakfast-service when presented to her. She was so much gratified with this tribute of an

infant art that she at once expressed a wish to have a complete table-service of the same material. Wedgwood submitted patterns of the several pieces of ware, which were amended and finally approved. It was her unsolicited desire that the service should bear the name of "The Queen's Ware," and that the manufacturer should be appointed "Potter to Her Majesty."

Under this powerful patronage the ware found its way at once to the tables of persons of rank and influence, and came rapidly into general estimation and use. Indeed, it was of a quality so far superior to every thing which had before been made in this kingdom, and at the same time so moderate in price, that it could not fail to be favorably received. The other potters, availing themselves of his successful invention, with the advantage of being exempt from the anxieties and expenses which it had cost the inventor, soon set up works of the same kind, and queen's ware became the staple pottery of England.

On the queen's service being finished and delivered, the king gave Wedgwood his immediate patronage by ordering a similar service for himself, but without bands or ribs; this was called "The Royal Pattern." Their Majesties' patronage, by drawing public attention to the Staffordshire potters, opened up a source of wealth to many thousands of

people, and extended commerce to a marvellous extent, not only at home, but abroad. The tide of fortune which had thus set in was greatly increased by Wedgwood's subsequent inventions, and he emerged from his small manufactory at Burslem to the colony which he afterward established at Etruria, a few miles distant.

The forms of the vessels in use were greatly improved by Wedgwood. Other manufacturers followed his example; they adopted his models, for he took out no patent (with only one exception, of no special importance), and all his efforts and inventions virtually became the property of his competitors. His forms were copied by the manufacturers in his neighborhood, both by silversmiths, bronze-makers, and other workers in metal. Boulton of Birmingham admired Wedgwood's vases so much that he almost wished to be a potter; but, as we have said, he was satisfied with mounting in metal the vases which Wedgwood had made. "The mounting of vases," said Boulton, "is a large field for fancy, in which I shall indulge, as I perceive it possible to convert even a very ugly vessel into a beautiful vase."

The engine lathe, although no patent had been taken out for its application to the manufacture of pottery, became in the hands of Wedgwood an ever-increasing power. It was soon applied to the decoration of vases made in

the green ware after the antique, and also to carry out the designs of several ingenious ladies and gentlemen who furnished him with proper models, both original and Etruscan.

But Wedgwood left every potter free to imitate his designs. As he himself said, a patent would have greatly limited its public utility. Instead of one hundred manufacturers there would only have been one; and instead of exporting to all quarters of the world a few pretty things would have been made for the amusement of the people of fashion in England. NB

In the last century Burslem and some other villages in Staffordshire were famous for their milk-pans and butter-pots. About a hundred people were then occupied in their production; while now there are about ten thousand workmen employed in manufacturing useful and ornamental wares, and besides the home-consumption, an annual export takes place to the amount of nearly two hundred thousand pounds. This surely is greatly to the credit of the industry and enterprise of Staffordshire.

Wedgwood eventually did what Lord Gower and his other friends had so strongly advised him to do: he opened a warehouse in London for the exhibition of his queen's ware, Etruscan vases, and other useful and artistic works. He had before a small storehouse in Cateaton Street for shop and exported goods; but in August, 1765, he hired an establishment in NB

Newport Street, which he afterward removed to Greek Street for larger accommodation; and there his brother John exhibited his works to numerous admiring visitors. In fact, his show-rooms were as much crowded as exhibitions of the Royal Academy.

Wedgwood also hired works at Chelsea, where he employed enamellers, modellers, and artists. He was under the necessity of frequently visiting London to superintend their important operations. His mind was thus constantly occupied, what with his own special responsibilities at Burslem, his efforts to improve the roads and canals through Staffordshire, and his endeavors to advance the manufacture of vases and earthenware. When asked whether he had read the review of Mr. Priestley's work, he answered: "Indeed, the truth is I have scarcely read any thing at all, or thought of any thing at all, but pot-making and navigating; and when it will be otherwise with me I really cannot tell."

It was one of Wedgwood's great objects to revive the classical works of the Greeks. He imitated the fine vases which he found in the Montfaucon and other collections, and in the best works of his own time. He was under the impression that the improvement of pottery, while exciting the public attention to these beautiful works, would contribute to lay the foundation of a school of modelling and artis-

tic manufacture. At the same time, notwithstanding all that he had done to improve this branch of industry, he used to declare, even in his later days, that he considered pottery as still but in its infancy. He was enabled to carry his designs into effect, to a certain extent, by the liberal and patriotic disposition of their Majesties, by the nobility, and others, who opened their cabinets and permitted him to take copies of the finest pieces they had purchased in the course of their travels.

About the year 1766 he first produced the unglazed black porcelain to which he gave the name of basaltes, from its possessing the properties of that stone, a variegated terra-cotta, a white wax-like porcelain, and other inventions adapted to different purposes. In ancient times the Etruscans painted their vases with durable colors, which were burned in by fire. Even in the time of Pliny these vases, so prepared, were regarded as one of the lost arts of preceding ages. Wedgwood, by his experimental skill and his extreme perseverance, revived this lost art. The colors he burned in were fully as beautiful as the originals, and susceptible of greater variety. These revivals, in the newly invented materials, soon caught the public eye and occasioned a rapid demand for Wedgwood's productions, as well as for those of the manufacturers who so eagerly followed his example.

Wedgwood was at Newport Street, London, at the end of 1765 ; he then wrote to Bentley, still at Liverpool, on the subject of his occupations : “ *An epidemical madness,*” he said, “ *reigns for vases,* which must be gratified. I have five or six modellers and carvers at work upon different branches, and a moulder constantly in my house. I have seen the Italian vases, and like them vastly ; have also seen some better prints of vases than any I have, particularly for bas-reliefs, and a friend has promised to lend them to me.”

And again in February, 1766 : “ Let all the hands that can be spared and can work at vases be employed on them . . . that the great demand for them here may not be balked. I could sell fifty or one hundred pounds’ worth per day if I had them.”

At this time Wedgwood was patronized by some of the principal artistic members of the aristocracy—by Lord Rockingham, Lord March, the Duke of Northumberland, the Duke of Montagu, Sir Thomas Gascoigne, and others, and was honored with an extraordinary commission from Catherine, Empress of Russia. He was directed to make a very large service of queen’s ware for her Majesty’s use, and to paint in black enamel, upon every piece, a different view of the palaces, seats of the nobility, and other remarkable places in the British kingdom. The idea was worthy of the mind

of a sovereign, but the undertaking seemed a great one for the powers of a private manufacturer. The number of views necessary for avoiding repetition of the same subjects was about twelve hundred, and a considerable proportion of them must necessarily be original drawings. Some three years were spent in making the collection of drawings and painting them on the ware, which was done with correctness of design, so that each piece was a good picture.

On the 14th of February, 1766, Wedgwood wrote to her Majesty's representative in London: "We shall send you the Russian table- and dessert-service faster than you can get them enamelled. I can promise with certainty that no part of it can wait for us, if you'll be so good as to push Mr. Coward with his carving." Wedgwood was greatly indebted to Lord Cathcart, the British ambassador to Russia, for his kindly help, and most probably his recommendation to the Russian empress. The preparation of her table-service occupied about eight years, principally on account of the large variety of different patterns that had to be enamelled; but at length it was exhibited in London in 1774. The service was shortly after presented to the empress and received by her with entire satisfaction. It is supposed that her Majesty paid for Wedgwood's work as much as three thousand pounds. But it con-

sisted of 952 pieces, and had involved an immense amount of labor. When exhibited at the rooms in Greek Street, it was one of the most popular sights in London. The money that Wedgwood received for the service scarcely paid its expenses ; but it acted as a splendid advertisement throughout Britain, and, indeed, throughout Europe, and its appearance largely increased the demand for Wedgwood's manufactures.

CHAPTER IX

FOUNDING OF ETRURIA—PARTNERSHIP WITH BENTLEY

THE great demand for the queen's ware and the other productions of Josiah Wedgwood led to a large increase in the population of Burslem. Houses could scarcely be built soon enough for the accommodation of the people. The demand for vases also brought a considerable number of artists and superior workmen into the neighborhood, and not only was the dwelling accommodation insufficient, but the factories also became overcrowded. The numerous hands could scarcely find room enough for the proper elaboration of their wares. X

It was therefore necessary that Wedgwood should make some arrangements for their proper accommodation. He did not like to leave his native town. He endeavored, in the first place, to ascertain whether he could not purchase and enlarge the manufactories in which he carried on his operations, and erect new dwellings for his work-people. Having by this time accumulated some savings, as well as increased his means by the fortune of his wife, he made a proposal to Thomas and John Wedgwood to NB

purchase the Ivy House and the Big House, which belonged to them, for the purpose of extending his works. But they declined his application, and he was obliged to look elsewhere for the necessary site. He still continued, however, to carry on his manufactory at the Brickhouse Works, which had for some time been in his possession as tenant.

Having been foiled in his endeavors to confine his pottery works to Burslem, he made enquiries for an estate on which to erect improved buildings, as well as dwellings for himself and family, and for his work-people and their families. He had no desire to remove his buildings far from Burslem, for he took a great interest in the well-being of the population. Being greatly attached to the cause of education, he subscribed liberally to a public school, and he never ceased to devote himself to the opening up of the turnpike roads and canals of Staffordshire.

At length he fixed his mind upon a suitable estate about two miles from Burslem, nearly in the centre of the potteries. It lay near the course of the Grand Trunk Canal, then in course of survey; so that a branch might easily be constructed to bring the proposed new works into communication with the canal. The place was originally called the Ridgehouse estate. It was in the possession of a life-tenant, and the reversion was with a gentleman

then in Ireland. With his usual prompt decision Wedgwood determined immediately to put himself into communication with this gentleman, though entirely unknown to him. He despatched a confidential professional friend to Ireland, who found out the reversionary proprietor, and satisfactorily completed the purchase. The rent was changed into an annuity for the life of the tenant, and thus immediate possession of the estate was obtained.

The land had little to recommend it besides the convenience of its situation. It was naturally an unproductive clayey soil, and was thought to be of little other value than furnishing clay for the use of the potters. But the spirit and enterprise of Wedgwood soon altered the appearance of the estate. He proceeded to build a large manufactory on the banks of the proposed canal; he laid out the grounds with great taste, assisted by Capability Brown; and contiguous to the works he raised a new village for the accommodation of the workmen and their families. NB

What was the place to be called? With the prospects he entertained, his skill and taste in endeavoring to infuse art into the manufactures of his country, and his intense admiration of the vases of antiquity, he determined to call the estate and its buildings *Etruria*, after the beautiful works of the famous Etruscans. In the course of a few years this formerly barren estate

was converted into a garden of beauty, and the manufactories built thereon became the sources of works of art which did so much for the improvement of public taste, as well as for the extension of British commerce.

We have already referred to the accident on the road to Liverpool, which first led to Wedgwood's acquaintance with Dr. Turner, and through him with Bentley, and have related how the friendship thus formed rapidly led to an almost brotherly intimacy. When Wedgwood purchased the Ridgehouse estate, he urgently requested Bentley to come over to Burslem and confer with him and his wife as to the laying out of the property.

"My Sally," wrote Wedgwood (15th September, 1766), "says your fat sides require a good deal of shaking, and she would recommend a journey on horseback, not in the coach, to Burslem. She is half angry with me for coming home without you; but your last letter hath brought her into a little better temper, as she expects not only the pleasure of seeing you here in a little time, but likewise a jaunt to Liverpool in consequence of your visit. Besides, she will not fix upon a spot for either house or gardens, nor even the stables, till you have viewed and given your opinion of the premises; so now, my dear sir, you are invited to the Ridgehouse estate in the quality of a Capability Brown."

The invitation was accepted, but Bentley did not "shake his fat sides" by riding on horseback, but by using the machine, or coach. He inspected the estate, and the site of his probable dwelling. It had been arranged toward the close of the year that Bentley was to become a partner with Wedgwood in a certain portion of his manufactures. The arrangement up to this time had been of considerable advantage to Bentley in his business at Liverpool. Instead of being a general agent he now confined himself to earthenware only. He superintended the import of clay from Dorsetshire, Cornwall, and Devonshire, and the export of Wedgwood's goods to America and other countries. The arrangement between the two was an equal division of the profits on the earthenware exports. Bentley took a partner—James Boardman—and his firm was afterward known as that of Bentley & Boardman.

The partnership between Wedgwood and Bentley took place shortly after Wedgwood's letter to Bentley (November, 1766), which was very encouraging. He proposed to build a house for Bentley at Etruria; but he said that it would be twelve months at least before the works could be built. He also mentioned the ornamental works that Bentley would have to superintend—vases of many sorts, toilet furniture, elegant tea-chests, snuff- and other boxes. "If all these good things should fail us," wrote

Wedgwood, "I hope your good genius will direct us in the choice of others."

Wedgwood still carried on assiduously his experiments on the raw materials of pottery. It will readily be understood that a thorough knowledge of the many kinds of earth upon the surface of the world comprises in its highest sense the power of the potter over his clay. It is truly the groundwork of his art. Such knowledge is an education in itself—the knowledge of clays, how they will bend, and how they will burn.

Let us look at a few of the records concerning these years, and see what kind of attention Wedgwood gave to this branch of his work. He possessed himself, at no small expense, of such different earths, stones, and clays in this island as were then known; and also of those that could be procured from foreign countries. Upon these specimens he experimented, analyzing to the best of his power their chemical constituents, and testing by practical experiment how far they might be made serviceable to his needs.

The results of his experiments were duly registered and set out in cabinets, so that they could be referred to and taken up for use at any time. It may be added that the specimens left at his death amounted to more than seven thousand, arranged in classes and subdivisions according to the purposes they were capable of

answering, or the views with which they were made. His note-books give one a fair notion of his enterprise in this direction. They contain long extracts from both English and Continental authors on mineralogy. Books of travel were ransacked to observe what the authors related as to the various kinds of earth in the lands they had visited ; and they also contain copious extracts from English topographical works. So much for Wedgwood's enterprise and industry in regard to earths and clays.

In one of his letters to Bentley, with whom he became more and more familiar in his communications, he said : "The fox-hunter does not enjoy more pleasure from the chase than I do from the prosecution of my experiments when I am fairly entered into the field ; and the further I go the wider this field extends before me." And in the same letter he says : "I have not been on horseback for a week. This morning some business calls me from my books and vases and trumpery ; and I am very thankful for it, for I have scarcely power of my own mere motion to quit my present pursuits for a few hours."

CHAPTER X

ROADS AND CANALS THROUGH STAFFORDSHIRE

WE have had frequent occasion to allude to the roads, or the absence of roads, which in those days existed in central England, to the inconvenience and restriction which difficulty of communication imposed upon trade and manufacture, and to the eager interest which Wedgwood took in the subject, not from personal motives alone, but for the public good.

In his early years the roads of Staffordshire were no better than those of England generally. In some respects they were worse. In Dr. Plot's time "the poor cratemmen carried the wares on their backs all over the country." The people were as rough as the roads. When Charles Wesley visited South Staffordshire in 1743, he records his visit to Walsall as follows: "The street was full of fierce Ephesian beasts (the principal men setting them on), who roared and shouted, and threw stones incessantly. At the conclusion a stream of ruffians was suffered to beat me down from the steps. I rose, and, having given the blessing, was beat down again, and so a third time."

We have already related how his elder brother, John Wesley, was received at Burslem a few years later ; how he was pelted with mud, and had no one to protect him ; and how at Congleton he was even worse received than at Burslem. All this, as Wesley admitted, was the result of intense ignorance. There had been no schools for the rising generation, and consequently no education. The Midland Counties were for the most part uncivilized, and still in the Dark Ages.

There was no other cure for it than by opening up the district by better roads to the influences of civilization. There were no roads as yet. They were merely lanes or trackways marked by upright stones. Arthur Young, on his tour in the North of England in 1768, describes them as "most execrable" and "infernal." He could not help swearing as he passed along them or round them. The lanes were scarcely sufficient for the slumpering along of pack-horses, let alone for carts or carriages. The people of Burslem were often short of coal in consequence of the badness of the ways. X The poor horses, though urged by lashing, could not drag themselves or their carts through the deep mud. They often fell, upset their loads of coal or crates of earthenware, frequently broke a leg, and had to be shot on the spot.

The inland situation of Burslem, with its few pottery villages, was thus exceedingly incon-

venient. While the potters employed only the clays in their own neighborhood, and their trade was of but small extent, their situation was tolerable; but when the trade increased, and they began to draw their heavy raw materials,—clays, flint stones, and porcelain earth,—from remote parts of the kingdom, and to send back their bulky manufactured goods in great quantities, the expenses of the conveyance and reconveyance, together with the carriage of coal, became a heavy import tax, and tended to retard the consumption of stoneware in most parts of the kingdom.

To redress this great inconvenience Wedgwood endeavored to get some of the worst parts of the roads improved, and placed in connection with the adjoining turnpike roads. A public meeting was held for the purpose, but the proposal was strongly resisted. When it was proposed to improve the chief road from Liverpool to the potteries, the inhabitants of Newcastle-under-Lyme bitterly opposed it. The innkeepers believed that the new road would take the drinking and other traffic away from their town.

When Wedgwood first proposed, at a public meeting at Burslem, to make four miles of road from that village toward Liverpool, he could not carry his resolution. Yet the road or lane, in its then state, was so bad that the common carriers used to make the distance double by

making a wide circuit so as to get round the muddy holes and ruts, and avoid miscarriages and upsets during their journey. The old and stupid objection was brought up by the opponents: "Why, the road has served us and our fathers for many generations, and it will continue to serve us still."

But Wedgwood had the sterling gift of perseverance. He continued to urge the necessity of opening up the country by means of new communications. He possessed a clear and forcible manner of expressing his thoughts, and slowly and by degrees he produced conviction in others, until at length he carried his point, and benefited those who had been most persistently opposed to him. He was aided also by men of rank and character, who espoused his cause; and in the course of a few years an act of Parliament was obtained to make a turnpike road, though only to a limited extent, and also to improve the paving of the pottery villages. In course of time, as the advantage of the new roads began to be ascertained, other turnpikes were successfully established wherever they were found to be necessary.

The inland situation of Burslem and the pottery villages was more and more felt as the trade of the country increased. The great ports most commodious for Burslem were Liverpool, Bristol, and Hull. Liverpool was the nearest. Goods for that port had a land car-

riage of eighteen miles to the nearest part of the River Mersey. Goods for Bristol were carried by land to Bridgnorth, about forty miles; and to Willington on the Trent, where the navigation to Hull began, about the same distance. It soon became clear to the observant and comprehensive mind of Wedgwood how infinitely convenient it would be to have an inland navigation established to bring Burslem and the pottery villages in connection with Liverpool, the nearest port.

The idea of such a navigation had long been mooted; but it was not until the Duke of Bridgewater had constructed and opened his canal between Worsley and Manchester, in July, 1761, that active measures began to be adopted to set on foot the proposed new navigation through the potteries. Wedgwood was the leading spirit, together with his friend Brindley, the engineer.

Wedgwood had known Brindley for some time. He had known him as a millwright, mechanic, mine-drainer, and tunnel-maker; indeed, Brindley was so ready to undertake any kind of work that he was generally known as "The Schemer." Among his various constructions was that of a mill near Burslem for the purpose of grinding flint—so much used by the potters for the manufacture of white ware. He had been informed of the distressing consequences to the workmen of inhaling the fine

particles of dry flint ; so that, in constructing the flint mill for John Wedg^{wood} at the Jenkins's, he suggested that the stones should be ground in water. This was done, and the result was that waste was prevented, the operation of grinding was facilitated, and the purity of the air was preserved to the advantage of the work-people.

Brindley was thus brought into direct connection with the Wedgwoods of Burslem ; and when the contemplated inland navigation through the potteries was proposed, it was natural that James Brindley and Josiah Wedgwood should be brought into close communication. The manner in which Brindley had conquered the difficulties of the duke's canal, and successfully accomplished the erection of his "Castle in the Air,"—that is, the crossing of the Irwell by the Barton Viaduct,—led to his being proposed as the only possible engineer for the new Staffordshire canal.*

The opening of a water communication through the potteries had long been the subject of discussion, and a survey was made by Brindley in 1760 at the expense of Earl Gower and Lord Anson ; but many years elapsed before any thing practical was attempted. The first public movement in support of Brindley's survey occurred in December, 1765, when an open

* The full account of Brindley is given in "Lives of the Engineers," vol. i.

air meeting was held at Wolseley Bridge. Earl Gower, Lord Ly. Grant of the county, occupied the chair, and Lord Grey, and Mr. Bagot, Mr. Anson, Mr. Gilbert, Mr. Wedgwood, and many more, were present. Brindley submitted his plans. They were fully discussed and finally adopted; and it was resolved that a bill should be applied for in the next session of Parliament to obtain powers to construct a canal from the Mersey to the Trent. Wedgwood, with his usual generosity, subscribed one thousand pounds toward the preliminary expenses, and also promised to subscribe largely for shares in the undertaking.

The principal promoters of the measure proposed to designate the work as "The Canal from the Trent to the Mersey," but Brindley, with sagacious foresight, urged that it should be called "The Grand Trunk Canal," because, in his judgment, numerous other canals would eventually branch out from it at various points of its course, just as the arteries of the human system branch out from the aorta. Brindley's views were adopted, and before many years had passed his anticipations were fully realized.

The Staffordshire potters were greatly delighted with the decision of the public meeting, and on the following evening they assembled round a large bonfire at Burslem, where they wished every prosperity to the Grand Trunk Canal, and drank the health of Earl

Gower, Mr. Wedgwood, Mr. Gilbert, and the other promoters of the scheme, with fervent demonstrations of joy.

Of course the proposal to make a canal through the potteries was bitterly opposed. Brindley's Grand Trunk line was intended to join the Duke of Bridgewater's canal at Preston-on-the-Hill, not far from Runcorn. As the duke was desirous of placing his navigation in connection with the Cheshire wiches and the Staffordshire potteries, and already had been at the expense of making a preliminary survey, he at once threw the whole weight of his support on the side of Brindley's Grand Trunk Canal.

The owners of the River Weaver Navigation Company were the principal opponents of the measure. They held that the new scheme would place a monopoly of the Cheshire and Staffordshire traffic in the hands of the duke ; though they concealed the fact that their opposition to the Grand Trunk would continue their own monopoly in the hands of the River Weaver Canal Company, whose navigation, so far as it went, was tedious, irregular, and expensive. Both parties mustered their forces for a Parliamentary struggle. Wedgwood, with his usual enthusiasm, entered the lists as a pamphleteer, and in conjunction with Bentley of Liverpool, afterward his partner, published an able statement, showing the advantages likely to be de-

rived from the construction of the proposed new canal. This pamphlet was circulated by thousands.*

In the course of his correspondence with Bentley, Wedgwood wrote to him from London about certain *corrections* and *alterations* which he had made in the pamphlet: "Must the uniting of seas and distant countries depend upon the choice of a phrase or monosyllable? Away with such hypercriticisms! Let the press go on. A pamphlet we must have, or our design may be defeated. So make the best of the present; and correct, refine, and sublimate, if you please, in the next edition."

The opponents of the measure also held their meetings and published their pamphlets. Brindley's plan was, on the whole, considered the best. The Grand Trunk would pass through important districts greatly in need of improved communication with the port of Liverpool on the one hand, and with Hull on the other. The principal difficulty was in getting over or through the summit at Harecastle. It was alleged by the opponents of the measure that the long tunnel at that point, or the immense series of locks, was a mere "chimerical idea," and could never be carried into effect. Brindley, however, insisted that, if the necessary

* "A View of the Advantages of Inland Navigation, with a Plan of a Navigable Canal Intended for a Communication between the Ports of Liverpool and Hull."

powers were granted, he would certainly drive the tunnel through the hill. His idea was to make as long stretches of flat canal as possible ; just as George Stephenson afterward, before the powers of the locomotive had been fully developed, preferred to go round a hill rather than surmount it or tunnel under it. Brindley avoided rivers as much as possible. He likened water in a river to a furious giant running down and overturning every thing ; whereas, "if you lay the giant flat upon his back, he lost all his force, and became completely passive, whatever his size might be."

It is quite unnecessary to describe the Parliamentary contest on the Grand Trunk bill. Wedgwood, in spite of his many important avocations,—his purchase of Etruria, his business in Liverpool and London, and the management of his works at Burslem,—often went to London to give his evidence in support of the measure ; and most of the landed gentlemen of his neighborhood appeared on the same side.

At length, after prolonged opposition, the Grand Trunk bill was passed, first through the Commons, then through the Lords, and on the 14th of May, 1766, it received the royal assent, and became an Act of Parliament. About the same time another important act was passed empowering the construction of the Wolverhampton Canal from the River Trent near Haywood Mill and the River Severn near Bewdley,

thus uniting the navigation of the three rivers which had their termini at the ports of Liverpool, Hull, and Bristol, on the opposite sides of the island.

Of course there were great rejoicings at Burslem on the triumph of Brindley, Wedgwood, and their friends. Shortly after the passing of the act, on the 26th of July, 1766, a general holiday was held at Burslem and the neighboring pottery villages. The first sod of the new canal was dug by Josiah Wedgwood on the declivity of Brownhills. It was placed in a barrow close at hand, and, Wedgwood being lame, it was wheeled away by Brindley amid deafening cheers. A barrel of old Staffordshire ale was broached, and the healths of Earl Gower, Lord Anson, Lord Grey, and others were drunk; and Mr. Wedgwood was thanked, in the name of the assembled potters, for his indefatigable services in the cause. Lunches and dinners followed. Mrs. Wedgwood entertained many guests. In the afternoon a sheep was roasted whole for the benefit of the poorer potters. After sunset bonfires were lighted in various parts of Burslem. A *feu de joie* was fired in front of Wedgwood's house, and sundry other demonstrations of rejoicing wound up the day's proceedings.

At a meeting of the proprietors of the canal, Mr. Wedgwood was unanimously appointed X treasurer of the undertaking. This was a great

honor. It proved the estimation in which he was held by those who knew him best, and the faith reposed in his spotless integrity. At a future meeting of the company the salaries of the officers were fixed; £200 per annum was the salary of James Brindley, the surveyor-general of the undertaking—very different indeed from the salaries paid to engineers nowadays. The committee ordered 150 guineas to be paid to Wedgwood, and £90 to Bentley, besides a balance which remained in his hands, for the printing, publishing, and distribution of the pamphlets in support of the undertaking.

Wedgwood had the greatest possible admiration for Brindley. He wrote to Bentley in March, 1767: "I am afraid Brindley is endeavoring to do too much, and that he will leave us before his vast designs are accomplished. He is so incessantly harassed on every side that he hath no rest for either mind or body, and will not be prevailed upon to take proper care of his health."

And again, in March, 1768, he wrote to Bentley: "Mr. Brindley and his lady called here on their way home. They spent the day with us and have just left this morning. We, my wife and myself, are to spend to-morrow with Mr. and Mrs. Brindley at Newchapel; and as I always edify full as much in that man's company as at church, I promise myself to be much wiser the day following. It is an old adage

that a man is either a fool or a physician at fifty, and, considering the opportunities I have had with the Brindleys and Bentleys of the age, if I am not a very wise mortal before that time, I must be a veritable blockhead in grain."

In answer to a letter of Bentley's on projectors in March, 1767, Wedgwood replied: "I most cordially join in your benevolent sentiments respecting projectors, but do not allow either of your exceptions, for I think Mr. Brindley THE GREAT. The fortunate, money-getting Brindley may be an object of pity and a real sufferer for the benefit of the public. He may get a few thousands, but what does he give in exchange? *His health*, and I fear his life, too, unless he grows wiser, and takes the advice of his friends before it is too late.*

"The other projector [Wedgwood himself] you are pleased to compliment with an exception is very sensible of how much he owes to your partiality, but he is in no danger of making a *plunk*, or what would be esteemed a fortune by any other than a little country manufacturer; and as to his projections,—those at least that are sacred to Mammon,—he would rather not hear them named seriously. Do you think, my friend, that the outline of a jug (even a Bolingbroke) or the fine turn of a teapot are synonymous with the creating of a

* Wedgwood was right. Brindley died of diabetes at the comparatively early age of fifty-six.

canal or the building of a city? No, no! my friend; let us speak softly, or rather be silent, on such fribbling performances. Your friend shall endeavor to please the ladies for the good of his family and friends, but he must not be vain of such trifles or mistake them for *great* actions."

The committee of the canal company, at one of their first meetings, ordered that the works should at once be proceeded with at both ends of the Harecastle Tunnel and also at Wilden Ferry. But many years passed before the Harecastle Tunnel was finished. Brindley died at the age of fifty-six, and the works were continued and finished by his brother-in-law, Henshall. Harecastle Tunnel was not opened until 1777—that is, it had been no less than eleven years in construction.

At the same time it must be said that the Grand Trunk Canal was the most formidable undertaking that had up to that time been constructed in England. Its whole length, including the junctions with the Birmingham Canal \times and the River Severn, was $139\frac{1}{2}$ miles. Wedgwood stuck closely to the canal during its long progress. None knew better than he the difficulties occasioned to the commerce of Staffordshire by the defective communications by road and canal to the ports of Liverpool and Hull; and none rejoiced more strongly than he did on the final completion of the works.

He had by this time bought and built Etruria, and brought a branch of the canal to an adjoining platform for the accommodation of the boats and the transport of his goods. He had removed his manufactory thither from Burslem, partially in 1769, and wholly in 1771, before the construction of the canal had been completed.

And now we must follow his career into an entirely new branch of his undertaking.

CHAPTER XI

IMPROVEMENT OF MODELS—CHEMISTRY

MR. WEDGWOOD, having now firmly established the manufacture of queen's ware, and vigorously assisted in the organization of the Grand Trunk Canal, felt it necessary to attend to his own special business. He was still anxious to devote himself to the study of chemistry as applied to clays and mineral substances, with a view to the production of a higher class of goods. His cousin Thomas, who had been foreman in his manufactory, attended to his London business, and became a partner in the sale of his useful class of goods.

Josiah Wedgwood proceeded with great industry in the study of chemistry. In the course of time he produced a number of different kinds of ware unknown before, and which soon gained for him a lasting and honorable fame. The queen's ware was greatly improved, and eventually caused an immense demand, not only in England, but throughout the Continent. This ware was composed of the whitest clays from Devonshire, Dorsetshire, and Cornwall. It was mixed with a due proportion of ground flint.

The pieces were fired twice, and the glaze was applied after the first firing, in the same manner as on porcelain. The glaze was a vitreous composition of flint and other white earthy bodies, with an addition of white lead for the flux analogous to common flint glass; so that when prepared in perfection the ware might be considered as coated over with real flint glass.

The entirely new pieces of earthenware and porcelain which Wedgwood produced, as the result of his chemical investigations, were the following :

1. A *Terra-Cotta*, resembling porphyry, Egyptian pebble, and other beautiful stones of the silicious or crystalline order.

2. *Basaltes* or *Egyptian*, a black porcelain biscuit of nearly the same properties with the natural stone. It bears without injury a strong fire, stronger, indeed, than the basalt itself.

3. *White Porcelain Biscuit*, of a smooth, wax-like surface, of the same properties as the preceding, except in what depends upon color.

4. *Jasper*, a white porcelain biscuit, of exquisite beauty and delicacy, possessing the general properties of the preceding, together with the singular one of receiving through the whole substance, from the admixture of metallic calces with the other ingredients, the same colors which those calces communicate to glasses or enamels in fusion, a property which no other porcelain or earthenware body of ancient or

modern times has been found to possess. This renders it peculiarly fit for cameos, portraits, and all subjects in bas-relief, as the ground may be of any peculiar color, while the raised figures are of a pure white.

5. *Bamboo*, a cane-colored biscuit porcelain of the same nature as No. 3.

6. A *Porcelain Biscuit*, remarkable for its great hardness, little inferior to that of agate. This property, together with its resistance to the strongest acids and corrosives, and its impenetrability by every known liquid, adapts it for the mortars of druggists and chemists, and many different kinds of chemical vessels.

These six distinct kinds of manufactures, together with the queen's ware already mentioned, were developed by the ingenuity and industry of the different manufacturers into an infinity of forms, both for ornament and use, variously painted and embellished. These constitute nearly the whole of the fine earthenware and porcelains which have by this time become the source of a very extensive trade, and which, considered as an object of national art, industry, and commerce, may be ranked as among the most important manufactures of the kingdom.

When Wedgwood finally entered into his partnership with Bentley, it was intended that the latter should fix his abode at Etruria for purposes of convenience, and the erection of a house was begun for him after a design of his

own, but before it was finished it was judged best that he should reside in London, and take charge of the warehouse which Wedgwood had found it necessary to establish there a few years before. A house was then taken for Bentley at Chelsea, near the Chelsea China Works, where Wedgwood established works of his own which his new partner superintended. X

The queen's potter was probably the first person in this country who conceived the design, already hinted at, of leading the public mind to the contemplation of the arts of antiquity, and of diffusing and perpetuating their glorious works by multiplying copies of them, just as literature has been diffused by the printing-press. The correct taste and the accuracy of discrimination which Wedgwood had already shown, and which had been improved by his study of the ancient Greek works, and the extreme perseverance of his chemical researches, which enabled him to discover the black basaltes, the variegated terra-cotta, the white, wax-like porcelain, and other substances, and the purpose to which he applied them, soon caught the public eye, and occasioned a rapid demand for his productions in the artistic line. Though many scientific potters may have since excelled Wedgwood, having his formulas to direct and guide them, he alone must be considered as the *pioneer* of artistic pottery in England.

He was enabled to carry his designs into

effect by the liberal and patriotic disposition of the nobility and gentry, who opened their cabinets to his uses, and permitted him to make copies of the fine pieces of work which they had purchased in the course of their travels in foreign countries. "I have been three days hard and close at work," Wedgwood wrote to Bentley in October, 1765, "taking patterns from a set of French china at the Duke of Bedford's, worth at least fifteen hundred pounds—the most elegant things I have ever seen; and I am this evening to wait and be waited on by designers and modellers."

The artists of various kinds whom Wedgwood employed were very numerous. Whenever he found a young man with artistic taste, he took him up, and helped him forward. He even founded a school for the instruction of young men and women in drawing, painting, and modelling.

Coward seems to have been one of the earliest artists employed by Wedgwood. In November, 1765, we find him writing to his brother in London to send to Burslem Coward's carvings of "Ich Dien" for the queen's service; "Satyr's Head" and "Laurel Festoons" for Lady Holland; and "Swan's Head" and handles for Lord Rockingham's vase. Ornaments of various kinds were required from Coward for orders from Lord March, the Duke of Northumberland, Lord Coventry, the Duke of Montagu,

Sir T. Gascoigne, and others. It may be mentioned that Coward, in conjunction with Hoskins, modelled from the antique the "*Somnus*," or "Sleeping Boy," one of the finest and largest works ever executed for Wedgwood. Coward was found so useful that, while other artists were paid so much for executing a piece of work, Coward was permanently retained by Wedgwood at two hundred pounds per annum.

John Bacon, afterward the famous sculptor, was another of Wedgwood's principal artists at one period of his life. Bacon was originally a cloth-worker with his father, but, showing a taste for drawing and designing, he determined to follow the bent of his genius. "Happiness," he said to himself when a youth, "is in every man's power who can learn to discipline his own mind,"—a bold but true thought,—and on this plan he made a philosophical attempt to secure his own happiness.

When about fourteen years of age, Bacon apprenticed himself to one Crispe of Bow Churchyard, an eminent maker of porcelain. His master observed his talents as a designer, and thus Bacon was soon promoted by his employer. Bacon learned under him not only drawing, but modelling. He also painted figures on plates and dishes. At that early age this helpful fellow principally supported his parents by the produce of his labors.

Bacon became fascinated by the pursuit of modelling. His models were sent to the pottery furnace in Lambeth to be fired. With a hopeful and willing spirit his work gradually improved. His ambition was stimulated, and he gave all his leisure hours to his new pursuit. He next proceeded to discipline his hand and eye in the severe school of sculpture. With such determination he could not but succeed; and, at the age of nineteen, he presented his first model in clay to the Society of Arts, for which he received a premium of ten guineas.

Bacon continued to labor in the pottery shop of Crispe for some years, gathering knowledge and experience. One of his first successful efforts was a small figure of Peace, after the antique style. He modelled some eight works for the Society of Arts, for which he received premiums—for one, a human figure as large as life, a premium of as much as £52 10s.

He removed from Crispe's workshop and became a successful laborer in Coade's Artificial Stone Manufactory, in Lambeth, shortly after its establishment in 1769. It must have been about this time, when he was looking out for a new employer, that Wedgwood became acquainted with him, and employed him on his new cameos and intaglios, which so greatly enhanced the reputation of his firm.

It is unnecessary to follow the further career of John Bacon; but it may be mentioned that

when the Royal Academy was instituted Bacon was twenty-eight years old, and in the year 1769 he had the honor of receiving from the hands of Sir Joshua Reynolds the first gold medal ever given for sculpture by the Royal Academy. The subject was Æneas bearing Anchises from the burning of Troy. After this his reputation became distinguished; and his works are still famous. His statue of Mars was copied in a reduced form by Wedgwood, and still remains one of his finest intaglios.

Bacon supplied Wedgwood with many other models — among others, with Apollo and Daphne, and several important patterns of vases and candelabra. He enamelled for Wedgwood a reduced copy of the bas-relief for which he had gained the gold medal of the Royal Academy. This was beautifully executed in jasper.

One of Wedgwood's cleverest artists was James Tassie. Born at Glasgow, he was originally destined for the business of a stonemason. Going to Dublin in search of employment, he was brought into connection with Dr. Quin, the physician, whose hobby was the imitation of gems in colored glass or paste. Dr. Quin engaged Tassie, and by their united labors great improvements were effected in that art. Tassie was encouraged by his patron to proceed to London to follow this art as his profession, and although he had many difficulties to

encounter, owing to his extreme diffidence, he eventually emerged from obscurity and established such a reputation that the principal cabinets of Europe were thrown open to him. In 1767 he obtained a prize of ten guineas for his imitation of an ancient onyx. He modelled gems and cameos for Wedgwood, and his works were always admired for their brightness and beauty. One of his finest heads was that of James Watt in wax. The author possessed one of them, a wonderful piece of work for delicacy and accuracy.

John Voyez was an excellent carver and enameller. Wedgwood was at the expense of removing him and his wife from London to Burslem, and there he worked under his master's eye, executing some beautiful bas-reliefs. But Voyez's morals were not equal to his artistic work. Under the influence of drink he committed some crime, for which the magistrates sentenced him to be whipped with a cat-o'-nine-tails, and imprisoned for three months. Yet the kind and forgiving Wedgwood, after his release, resolved to give him another chance. He again took him into his employment at the wage of two pounds a week. But badness must have been rooted in Voyez's nature. He was found betraying Wedgwood's secrets to one of his competitors; and eventually he fled from Burslem, involved in debt.

It is not necessary to enumerate all the artists

that worked for Wedgwood. Among them we find the names of Stothard, who in his early life furnished several beautiful designs ; Pingo, an Italian artist, who at an early period of Wedgwood's career modelled for him representations of the battles of Plassey and Pondicherry. Webber and Hackwood were constantly employed. Hackwood was a splendid modeller of portraits, some of which are classical. The magnificent portrait of Newton, after Roubiliac, is by him. Wedgwood called upon Roubiliac's widow, and she presented him with her husband's sketches, many of which Wedgwood afterward turned to account.

Stringer, the painter of Knutsford, was employed by Wedgwood to take views of English country seats for the Russian service. Stringer also visited Burslem. He painted figures and arranged sphinxes to support a beautiful column which Wedgwood had modelled. "Stringer," wrote Wedgwood to Bentley (November, 1767), "is now here ; he is good-natured, modest, and ingenious ; and as he has a ready hand at drawing, we can sketch out a vast number of pretty things, which may be laid by to mature till we can bring them into use. A manufacturer of ornamentals cannot have too great a store of that sort."

Burdett, a Liverpool artist, drew dead game for Wedgwood ; but he proved quarrelsome, and was discharged. Theodore Parker, Spils-

bury, and Shaw were among the decorative artists. Joseph Simon was an excellent London enameller, and was employed to decorate the Russian service. David Rhodes was, however, Wedgwood's principal enameller. Chitaqua, a Chinese modeller, took a likeness of Wedgwood, but it does not appear that he was afterward employed by the firm. Wright, the Derby painter, assisted Wedgwood with his pictures and illustrations; he suggested, and drew, or painted, "The Corinthian Maid," "Penelope Unravelling Her Web," "Ulysses and Young Telemachus," "The Lady in Comus," and other illustrations.

Among Wedgwood's good enamellers were Denby of Derby, who worked both at Etruria and Chelsea, and David Cooper of London, a flower-painter of considerable merit. Wilcox, from the Worcester Porcelain Works, together with his clever and ingenious wife, was employed at Etruria, and gave every satisfaction. They were afterward removed to Chelsea to take rank with the body of enamellers and decorators employed at Wedgwood & Bentley's manufactory.

Sufficient workmen and workwomen could not be hired to supply the demand for Wedgwood's vases and enamelled work. Art does not come by nature. Men and women must be taught and work hard before they can attain success; and many, many are the failures. We

know of artists who have descended from landscape painting to the selling of butter and cheese. "We could not live by art," they said, "but we can make a living by this humbler occupation." Wedgwood could not find a vase-maker without careful training. "Nay," said he, "I could not get a hand through the whole pottery to make a table-plate without training him up for that purpose."

Again, Wedgwood writes to his friend: "A waking notion haunts me very much of late, which is *the beginning of a regular drawing and modelling school to train up artists for ourselves*. I would pick up some likely boys of about twelve years old, and take them as apprentices until they are twenty or twenty-one, and when they had made some tolerable proficiency, they should practise with outlines of figures upon vases which I should send you to be filled up. . . . When you wanted any hands, you could draft them out of this school."

Mrs. Wilcox, a very good painter of flowers, as well as of figures, groups, and landscapes, was sent from Burslem to Newport Street in London when the show-rooms were opened there, and was one of the principal supports of Wedgwood's Art School in Chelsea. Mr. and Mrs. Wilcox travelled to London in 1769 by wagon, and were a week on the road. They were met at the Coach and Horses by some of the people from Newport Street, and were con-

veyed to their lodgings until accommodation could be provided for them at Chelsea. Mrs. Wilcox was a brave and valiant woman. She brought her pencils and brushes tied in a bundle, carefully preserved from the tread of the wagon folk. She brought her tools, but still more important, she brought herself. Her husband always admitted that she was much greater than he himself was. She long worked for Wedgwood, and, indeed, died in his service.

Among the women workers for Wedgwood Mrs. Landre stood pre-eminent. She modelled tritons, sea-nymphs, sphinxes, naiads, bacchantes, and draped figures—male and female. She also modelled candelabra on a large scale. Miss Pars and Miss Glesson were also among those who were employed in the decoration of the Russian service. Wedgwood was much indebted to Mrs. Southwell, who visited his works at Etruria. "She knows," he wrote to his partners, "the art of disposing the most beautiful productions of nature in the most agreeable, picturesque, and striking manner." He again adds: "Mrs. Southwell is a charming woman. I am more and more in love with her every time I see her, and, having such a mistress in the science of flower-drawing, I hope that our future productions will show that I have profited accordingly."

Wedgwood engaged the best artists, wherever he could find them. He sought them out

among the London fan-painters, coach-painters, and fresco-painters. It did not matter whether they were men or women. Both were alike employed. One Croft struck out a scheme for employing faint white outlines on the vases; this was followed by Hutchins from Soho. The border lines were traced at Etruria, and the colors were afterward laid on at Chelsea. Bakewell of Liverpool and Ralph Unwin of Burslem were employed on this work; for there continued to be—to use Wedgwood's words—"an epidemical madness for vases."

CHAPTER XII

AMPUTATION OF WEDGWOOD'S RIGHT LEG

IN narrating the life of Josiah Wedgwood frequent reference has been made to the attack of virulent small-pox from which he suffered, as a boy of eleven years old, in 1741, and to the legacy of incessant and frequently excruciating pain which it entailed on him. In addition to this, however, the disease left other sequelæ in an impaired constitution and partial blindness, as well as other ailments, from which he never completely recovered.

It is necessary to bear in mind the terrible affliction thus caused to a nature so active and energetic as Josiah Wedgwood's. The enforced idleness of body could not subdue his indomitable perseverance, but only afforded the opportunity for that cultivation of mind which had been denied him in earlier years. The accident on his journey to Liverpool brought about his introduction to Dr. Turner, and through him his acquaintance with Bentley, and such men as Dr. Priestley, Dr. Aikin, the Heywoods, the Percivals, Mr. Wyke, the clever watchmaker, and the Rev. William Wil-

let, who afterward married Catherine, Wedgwood's youngest sister.

His affliction, therefore, was not altogether without recompense, but it was an ever-present source of bodily pain and commercial hindrance.

While in London on the navigation business, in November, 1765, Wedgwood had a brief but alarming attack of illness which greatly prostrated him. His wife and cousin were happily near. They helped him to conduct the business he had come to London about ; and in a short time he was again at work, though far from convalescent.

The bilious attacks to which he was liable returned in July, 1767, and, as usual, depressed his spirits and greatly disheartened him. His friend Dr. Darwin recommended exercise ; and he rode on horseback from ten to twenty miles a day. A month later his unfortunate knee again troubled him. He had intended to visit Bentley at Liverpool, but he felt quite unable to ride so far. He wrote to his friend : " I cannot do much longer without seeing you, but I am at present disabled for travelling far from home by a sprain of my bad knee, which will, I fear, confine me some time near home."

It was so constantly with him. He was sometimes better, sometimes worse. At one time it was his liver, at another time it was his disabled knee. It seemed to be a case of metastasis, a change of the disease from one part of the

body to another. He wrote to Cox of London, who was hiring new show-rooms for him, saying that he had overwalked and overworked his leg, and the result was intense pain. He again consulted Mr. Bent, the surgeon of Newcastle-under-Lyme, who tried embrocations externally and emetics internally. He thus described the results to Bentley: "The pain had no sooner left my knee than I was very ill in other respects; I suffered from great heat and difficulty of breathing, insomuch that I was glad to feel the pain again returning to the knee, and as the pain again returned into that part, the other symptoms left me."

Though Wedgwood was now a comparatively thriving and prosperous man,—master of a large pottery establishment, treasurer of the Grand Trunk Canal, and interested in many public undertakings,—the disease in his knee was constantly returning. It was a constant source of pain and worry. It interfered with his sleep—"tired nature's sweet restorer, balmy sleep." It hindered his peace of mind. It prevented him attending to his business. He could not even conduct his correspondence. He began to contemplate the idea of getting rid of this terrible incumbrance.

On the advice of his friend Dr. Darwin he determined to consult a surgeon. Had conservative surgery existed in those days perhaps his limb might have been saved. But Wedg-

wood had to accommodate himself to the then condition of surgery. He was now making up his mind to a radical cure, which might forever rid him of his tormenting knee. It was no doubt a heroic remedy, and it might prove a dangerous one. It was no other than the amputation of his right limb. He finally resolved upon the operation, and the amputation took place upon the 28th May, 1768, about four years after his marriage.

Mr. Bent, assisted by a local surgeon, performed the operation. The faithful Bentley came over from Liverpool to support Wedgwood's courage. But, so far as that went, he had courage enough. There were no anæsthetics in those days, but he would not have the operation hidden from his view, but deliberately watched the surgeons. There were the tourniquet, the knife, the saw, the forceps, the ligatures, the sewing of the flaps, and the strapping. He was thus finally relieved from the knee which had tormented him so long; and during the operation the brave Wedgwood never shrank nor uttered a murmur. Yet for many years the severed nerves continued to convey sensations to the brain or to the nervous system which had been affected, so that he continued to feel the remains of the pain in what he called his "no-leg."

During Wedgwood's illness his wife's conduct was admirable. Although she had to at-

tend the sufferings of her dying boy, she never ceased to pay her loving attentions to her "dear Joss." She conducted his correspondence, and did every thing she could, by her alacrity and cheerfulness, to keep his mind as free as possible from the cares and troubles of ordinary life. When the surgeons saw that the operation had been successful, they left the case to the care of his wife. She dressed the wound from day to day until the patient was finally cured.

When Bentley found that Wedgwood was out of danger, he returned to Liverpool to execute his friend's orders. He and his partner, Boardman, were for some time exceedingly busy with despatching crates of earthenware to foreign ports. During Wedgwood's illness many enquiries were made by distinguished persons after his welfare—by Lord Gower of Trentham, by the Duke of Bridgewater of Worsley, and by the Dukes of Bedford and Marlborough, Lords Cathcart and Bessborough, Sir William Meredith, Sir George Saville, and many others. Dr. Darwin was also a frequent visitor while Wedgwood was confined to his room. If good wishes could have cured him, he must soon have been happy upon his solitary leg.

While Wedgwood lay in bed, after the amputation, Peter Swift, of the Burslem Works, wrote an invoice of cream ware to Cox in London, dated 28th May, 1768, to which he ap-

pended this note : “Mr. Wedgwood has this day had his leg taken of [*sic*], and is as well as can be expected after such an *execution* !”

Bentley’s correspondence continued to be most loving and affectionate. It was one of Wedgwood’s greatest pleasures to receive, read, and study his kind communications. In one of Wedgwood’s replies, written about a month after the operation, he said :

“MY DEAR FRIEND : I have many, very many, most kind and affectionate letters from you to be thankful for, with a thousand other instances of your esteem ; but that is too cool a term to express the feelings of my heart. . . You know, indeed, that I could not for a moment cease to love and be grateful to you, now I am recovered so far as to be able to write. I find myself over head and ears in debt as to replies to your communications, and every post is increasing the heavy load. It is this that confines me to the house, and retards my perfect recovery.

“At present I am well, even beyond my most sanguine expectations. My leg is almost healed. The wound is not quite two inches by one and a half. I measured it with the compasses this morning when I dressed it. Yes ! when I dressed it ; for I have turned my surgeon adrift, and Sally and I are sole managers now. Only, we give him leave to peep at it now and

then, when he lifts up his hands and eyes, and will scarcely believe that it is the wound he dressed before."

Wedgwood continued to take his usual interest in the building of the works at Etruria, and showed his kindness to the workmen employed. On the 20th of June, less than a month after the operation, he wrote to Bentley: "I am pleased with your feeling so much for the poor mortar maker, and I will endeavor to set his mind at rest. Mr. Pickford [the master builder] has much of the bashaw in his treatment of workmen, and does not consider that they have any feelings at all. I have seen many instances of this, and may perhaps some time or other find a mode of conveying to him a lecture upon the proper treatment of our inferiors, and to prove that our 'humble friends,' as some one beautifully calls them, have like passions with ourselves, and are capable of feeling pain or pleasure in the same manner as their masters."

After this amputation of his leg Wedgwood had to walk with the aid of crutches, for cork legs had not been invented, and he had to wait for a proper firm leg until his next visit to London. Some months after the amputation he wrote to Dr. Darwin: "My first wooden leg was made by Mr. Addison, lay-figure maker in Hanover Street, Longacre." But Wedgwood

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was so active and spirited a fellow that he required a constant succession of wooden legs.

On the 14th of July, 1768, he wrote to Bentley from Burslem: "My London modeller has come, and we are sketching out some employment for him. I have accidentally met with another artist who is like enough to stick by me if you can send a good, sober, honest account of him. He is a mathematical instrument maker, a wooden leg maker, a caster of printer's types, and, in short, a jack-of-all-trades. He has been at Liverpool about half-a-year, working with a mathematical instrument maker near the 'Change. He has also done some letters for Mr. Perry. His name is Brown, and he wears a wooden leg. At present he is making me some wooden legs. As he can forge iron, file extremely well, and cast in various metals, I shall employ him in making and repairing engine lathes, punched by tools of various sorts. If his character be good, he is just the very man I want."

In writing to her agents in London Mrs. Wedgwood says: "The peg leg is much wanted." In February, 1769, he writes that he cannot attend the Grand Trunk Canal meeting, because his leg was repairing! He had an immense deal of trouble indeed with his pin leg! In a letter to Mr. Steward, written by Wedgwood himself at a later date, he regrets that he had met with a slight hurt, which

rendered him unable to wear his artificial leg, and thereby confined himself at home; but he added: "I have now got well, and go abroad again, though I am not fond of doing so in frosty weather, being not so expert a footman as I have been, and a slip or accident to my better leg might lay me up for good and all."

There was a great deal of trouble about the "spare leg." In a letter to his brother in London Wedgwood said: "Send me by the next wagon a spare leg, which you will find, I believe, in the closet. . . I shall make a wretched walker in the dark with a wooden leg." At the same time there was a large demand for vases, which Wedgwood did his best to supply. He went to London in February, 1769, and superintended the operations there for six weeks. After his return to Burslem he wrote to Bentley at Liverpool, who had just returned from Newport Street, London, and said that there was "no getting to the door of the show-room for coaches nor into the rooms for ladies. Vases are still the cry." We add another part of Wedgwood's letter: "Be so good as let us know what is going forward in the great world; how many lords and dukes visit your rooms, praise your beauties, thin your shelves, and fill your purses; and if you will take the trouble to acquaint us with the daily ravages in your stores, we will endeavor to replenish them."

But still worse than Wedgwood's pin leg

were the attacks of blindness, with which he was threatened toward the end of 1769. He had an inflammation in his eyes which partly blinded him. Spectra and atoms shut out the light. "My eyes," he wrote to Bentley in December, "continue the same. It is just dark, and I am absolutely forbidden to write or read by candle-light. Clouds and atoms are before me. I fear, indeed, about my brain becoming affected. I intend to go to London for advice. I am advised to have a perpetual seton placed behind my neck."

To save his eyes Mrs. Wedgwood, his faithful wife, wrote a long letter to Bentley. "The complaint in Mr. Wedgwood's eyes," she begins, "which he mentioned to you in London, is growing worse. He has consulted Mr. Bent, who advises him to use them as little as possible, and not to write by candle-light at all, for which reason he knows you will excuse him for not writing. Mr. Bent has ordered him to take some pukes [emetics]. He has already taken one, and thinks he is something better, and is to take another to-night." Then she goes into business matters which occupy several pages quarto.

It was a great privation for Wedgwood to be debarred from reading, as he desired to use his confinement for the opportunity of repairing the deficiencies of an education which had unavoidably been narrow. Indeed, he took so

much delight in reading that he often declared that the height of his ambition was to earn a small competence, such as might enable him to spend the remainder of his life in literary studies.

But business had, in the meantime, to be attended to. In June, 1779, we find him writing to Lord Paget, stating his concern at not being able to wait upon his lordship at Etruria because of his being unable to start at that time without crutches. But he proceeded to give Lord Paget written information as to the ideas he had been enquiring about.

After his eyes had recovered he could both read and write about models of *The Muses*, *Hercules*, *Omphale*, *The Piping Faun*, *The Vestals*, *Æsculapius*, and other artistic products. At the same time he added: "I believe it would do me a great deal of good to have my head quite clear of all business for a fortnight."

To show the kindly feeling that existed between Wedgwood and Bentley we quote the following further letter, on the occasion of Bentley being invited to Etruria at Christmas-time: "How happy should I be in spending a few weeks or even days with my dear friend! His letters console and comfort me greatly; but his cheerful and enlivening company, with the visible emanations of his sympathetic heart, would be a cordial indeed. . . But there is a gulf between us which neither one

nor the other can pass with any degree of propriety, prudence, or convenience.

“I am equally engaged and tied down to this spot. The frost has now nearly left us, and we are going to set out the buildings. . . The price Mr. Pickford has given us in his estimate is much higher than that I can agree to . . . but we are to try what we can do to-morrow.

“All our little folks are jumping and skipping about us. We have had one high day, concluding with a dance. We had a second day with the non-dancers. If you arrive in time, we shall have a third.”

CHAPTER XIII

WEDGWOOD'S ARTISTIC WORK

THE erection of the works at Etruria was now nearly finished. Bentley's house was ready for his reception. He was now Wedgwood's partner in artistic and ornamental ware. Wedgwood was anxious to see him at Burslem about an extension of his London show-rooms. "Pall Mall," he said, "is the best situation in London. There is now an auction-room occupied by the artists for their exhibition. I should like to have your opinion about it. . . Besides room for my ware, I must have more room for my ladies, for they sometimes come in such very large shoals together that one party are often obliged to wait until another have done their business. . . I have now about some five hundred things to do. I am preparing designs, models, moulds, clays, colors, and such like for the vase-work, by which means we shall be able to do business."

In a subsequent letter he says : "I am going on with my experiments upon various earths, clays, etc., for different bodies, and shall next go upon glazes. Many of my experiments turn

out to my wishes, and convince me more and more of the extensive capability of our manufacture for further improvements. It is at present in a rude, uncultivated state, and may easily be brought to much greater perfection. Such a revolution is, I believe, at hand, and you must assist me and profit by it. . . Why, you never knew so busy a mortal as I am; highways, canals, surveying, engine-lathe making, experiments for porcelain, or at least a new earthenware, fill up about every moment of my time."

From a very early period Wedgwood had desired to obtain Bentley as a partner. His object was to secure the aid and counsel of a man of sound judgment upon whose fidelity and ability he could thoroughly rely. He had not been satisfied with his London agents; and as he became better acquainted with Bentley, he believed in him more and more, and became increasingly anxious to obtain his services. The two became so intimate that Bentley was the only friend that had been present at the amputation of Wedgwood's limb. Yet Bentley was a modest man: he was not ambitious nor desirous of accumulating wealth.

At first he declined Wedgwood's offer. He was satisfied with his position at Liverpool, where he and his partner had for some years been carrying on a large exporting and importing trade for Wedgwood and others. But

Wedgwood would not be denied. He pressed the matter of the partnership again and again ; and at length Bentley resigned his position at Liverpool in favor of Boardman.

Wedgwood desired Bentley to reside at Etruria in order that he should become thoroughly initiated in the affairs of the firm. Bentley went first to London to look after the state of the agency there ; and meanwhile his house at Etruria was proceeded with until it was nearly ready for occupation. But Bentley never took possession of the house, his presence in London being considered more necessary for the progress of the firm.

From the date of his recovery Wedgwood became more and more absorbed in the details of his business. He strove to introduce the highest art in the production of earthenware. The drawings burned in upon the edges of the plates and dishes were greatly improved. Wedgwood desired to foster and create a taste for works of art. He employed Stothard and other artists to design for him, and some of their works were of a very superior character.

At the same time Wedgwood made many improvements in the form and material of his productions, especially in his vases, the demand for which became very great. He was constantly making enquiries about new clays for the improvement of his wares.

In 1768 Wedgwood despatched his traveller

Griffiths to South Carolina for the purpose of obtaining some very precious white porcelain clay which, he understood, was to be obtained in that quarter. The voyage proved a perilous one. Violent storms pursued the ship. An Algerine cruiser attempted to overhaul them. At length they reached Charleston in safety. But more danger had to be encountered. Griffiths and his party had to travel some three hundred miles into the heart of the country, which was beset by thieves and robbers. When they reached the Ayoree and Chikoree country, the savage Indians threatened to kill them because of their trespass on the hunting-grounds. At length, after being protected by the squaws, Griffiths succeeded in filling five rough wagons with five tons of pure white earth or clay, and conveying the wagons amid considerable peril to Charleston. From thence the stuff was forthwith shipped for England.

Wedgwood also despatched another messenger to obtain some other notable clay from Pensacola, in Florida. Wherever suitable clay was to be had throughout the world, he invariably contrived to make diligent search for it. He obtained, near at hand, from Anglesark, in Lancashire, *Terra ponderosa*,—what the French potters term *Spath fusible*,—and of this also he made diligent use. He continued to model from antique forms, especially from the Etruscan; and he made every enquiry of his dis-

tinguished friends for the purpose of obtaining new models for the antique vases. Lord Gower, Lord Cathcart, the Duke of Bedford, and Sir William Hamilton were in this way of the greatest assistance to him.

In order to exhibit his artistic works it was necessary that they should be shown in some well-frequented district. Wedgwood found some excellent show-rooms at the corner of Newport Street and St. Martin's Lane. There he exhibited his best vases and other works of art. No person could have exhibited these artistic wares with better address than Bentley. He was handsome in person, and polished in manners and conversation. He entertained his morning audiences of dukes, duchesses, and other noble personages with great suavity and grace. He could speak most European languages, and descant to his hearers on Greek and Etruscan art, or converse in French and Italian with foreign ambassadors on the progress of artistic manufactures in Paris or Rome.

Among Wedgwood's numerous friends was Matthew Boulton of Birmingham. Boulton was a public-spirited man. He was one of the early promoters of the Grand Trunk Canal, of which Wedgwood was treasurer. He was one of the men who faced and overcame many difficulties. When James Watt's condensing steam-engine was in such a state that no mechanical engineer would even look at it, Boulton took it

up, and after many years of trials and heavy losses he eventually, with the assistance of Watt and Murdock, established the engine as a novel and extraordinary working power.

Before his partnership with Watt, Boulton had been better known in connection with the inlaying of steel and the manufacture of bronze ornaments. As his business increased he desired to extend his works. He could not find premises in Birmingham to suit his purposes; but he found a large rabbit warren at Soho, about two miles off, which he leased for a lengthened period, and proceeded to erect thereon extensive works. These soon after became the home of the condensing steam-engine, and the great mint of British coin.

Josiah Wedgwood had been in a similar position at Burslem, when he proceeded to buy the comparatively barren Ridgeway estate, about two miles off. He, too, converted an unfruitful region into a mine of wealth. While the works at Etruria were in course of erection, no one was better able to advise Wedgwood as to the organized system of details than Matthew Boulton of Soho. The two friends often met together, and Boulton revealed to Wedgwood the entire series of his operations—his bookkeeping, his method of finance, his agencies, his system of accounts, and all the other details of a large and increasing trade.

Wedgwood had the highest opinion of Boul-

ton's business genius. "He is, I believe," wrote Wedgwood to Bentley, "the first most complete manufacturer of metal in England. He is very ingenious, philosophical, and agreeable." Wedgwood's success had been so great that Boulton told his friend that he admired his vases so much that he almost wished to be a potter. At one time, indeed, he had serious thoughts of beginning the fictile manufacture; but eventually he was satisfied to mount in metal the vases which Wedgwood had made.

In view of the probable encounters in pottery Wedgwood wrote to Bentley in 1769: "It doubles my courage to have the first manufacturer in England to encounter. The match likes me well. I like the man; I like his spirit. He will not be a mere drivelling copyist like the antagonists I have hitherto had, but will venture to step out of the lines upon occasion, and afford us diversion in the combat. . . . If we must fall, if Etruria cannot stand its ground, but must give way to Soho, and fall before her, let us not sell the victory too cheap, but maintain our ground like men, and endeavor even in our defeat to share the laurels with our conquerors."

Boulton and Wedgwood, however, never waged warfare with each other. They remained sincere friends during the rest of their lives. Wedgwood paid a visit to London, accompanied by his wife and Mr. Bentley, in

October, 1768. The apartments above the warehouse were prepared for their reception, and they spent many happy days there. Matthew Boulton, from Soho, was in London at the same time, and he and Wedgwood went about searching for antique vases, the one to reproduce them in bronze, and the other in jasper or basalt.

After a month's stay in London Wedgwood, his wife, and Bentley returned to Burslem. Bentley was the guest of Wedgwood at the Brick House. During the first six months of 1769 Bentley passed from London through Burslem to Liverpool to wind up his affairs at the latter town, and to counsel his friend as to the new buildings at Etruria. At length the Ornamental Works at Etruria were ready for occupation on the 13th of June, 1769. The other buildings, called the Useful Works,—that is, for the manufacture of ware for commercial purposes,—were only in progress. The canal in front of the buildings was far advanced. The mansion intended for the accommodation of Wedgwood and his family was also in progress, but by no means ready for occupation.

It was a great day for Etruria. Mrs. Wedgwood, with her two children, and other friends, had come over from Burslem to see the beginning of the works. Wedgwood and Bentley were the first operators. Wedgwood threw off his coat and hat, turned up his shirt-sleeves,

and, putting on a workman's apron, sat down at the thrower's board, while Bentley turned the wheel, making the disk to revolve, while Wedgwood modelled the six three-handled vases in black basalt. After this had been done there was an adjournment to the turner's room, where Wedgwood pared down the inequalities by the lathe, after which they were ready for firing. Then followed a luncheon and a banquet to drink success to the new undertaking. The vases were described by Wedgwood as "the first fruits of Etruria." After being burned they were sent to London to be painted in encaustic colors by one of Wedgwood's artists. The subject was "Hercules and his Companions in the Gardens of the Hesperides," taken from one of the Etruscan antiquities belonging to Sir William Hamilton.

In August, 1769, Bentley proceeded to London, where he remained for a time at the warehouse in Newport Street, and afterward to the dwelling at Chelsea which had been taken for his accommodation. Wedgwood had already an establishment at Chelsea where he manufactured some of his ornamental wares. The place was more convenient for his London artists and enamellers. Bentley's house was situated in Little Cheyne Row, within about a stone's throw of the manufactory.

The demand for Wedgwood's vases still continued more brisk even than before. It broke

out in Dublin as well as in London. In one of his letters to Bentley, Wedgwood said: "Sir William Chambers, the architect, would not stop to tell me the difference between urns and vases, as he was going to wait upon the queen, and he was so obliging as to take a piece of my ware with him—a covered dish enamelled after his own drawing."

With respect to his drawing-book of vases, to be inspected at the London show-room by the visitors, Wedgwood said: "I need not tell you that it will be to our interest to amuse and divert and please and astonish, nay, and even ravish, the ladies. But who am I writing to? Not to my wife, I hope. No, she must wink here; this is all under the rose. It is to my good friend—vase-maker-general to the universe." Again he says to Bentley: "I have really more business cut out for me than I well know how to execute."

At the beginning of 1770 Wedgwood proposed to Bentley that he should leave the London rooms and go down to Etruria to learn the secrets of the art of pottery. "I would just mention to you," said Wedgwood, "that when you have settled matters in the best manner you can return to London and Chelsea. I could wish you to be at the manufactory a while to learn the art of pot-making while I am able to go through that branch with you, which I shall do with great pleasure, and I hope you will

carry on to great perfection those improvements which I have been endeavoring to lay a foundation for, and shall be happy in leaving them with you, my good and worthy friend, who neither wants ability nor spirit to pursue the task. May it be a pleasing and successful one,—indeed, I have no doubt but that it will,—and so long as my eyes and my health will permit I shall gladly assist you in it.”

All the artists were at work—Bacon, Tassie, Mrs. Landre, Mrs. Wilcox, from Worcester, and others. Wedgwood was still busy with the improvement of the lathe for manufacturing purposes. He wrote to Bentley: “I believe we shall make an engine-lathe or two here, and can do it better than at Liverpool. We have an ingenious and indefatigable smith among us who, ever since engine-lathes were first introduced here, has been constantly employed in that business; and he promises me very faithfully that whatever improvements I may instruct him in he will make them for no one else. But that, you know, is a superfluous engagement, as we have renounced those narrow, selfish views, and are to let our improvements take a free course for the benefit of our brethren and our country.”

We give another passage from one of his letters to Bentley: “I would propose for this winter’s sale of vases four species only, viz., blue pebble, variegated pebble, black Etrus-

can, and Etruscan encaustic. These, with the variations of sizes, forms, and ornaments, gilding, veining, bas-reliefs, etc., will produce business enough for all the hands we can possibly get together. . . I shall be glad to have your thoughts upon this subject. You'll easily observe the foundation of my arguments is money-getting. Take that away, and they all drop to the ground. Instead of this, if you substitute Fame (and my bosom begins to glow with a generous warmth at the idea)—I say if instead of money-getting you substitute Fame and the good of the manufacture at large for our principles of action, then we should do just the contrary of what I have been recommending.

“Make all the good, fine, and new things we can immediately, and so far from being afraid of other people getting our patterns, we should glory in it, throw out all the hints we can, and if possible have all the artists in Europe working after our models. This would be noble, and suit both our dispositions and sentiments much better than all the narrow, mercenary, selfish trammels—the coats of mail we are forging for our reluctant hearts, to case and hamper them in their journey through life, and prevent all benevolent overflowings for the good of their fellow-citizens. . .

“When the public are witnesses to our bestowing so much pains and expense in the improvement of a capital manufacture, nay, in creating

a new one, and that not for our particular emolument only, but that we generously lay our works open to be imitated by other artists and manufacturers for the good of the community at large, this would certainly place us in a very advantageous light in the public estimation."

In another letter to Bentley, Wedgwood says :
"A German has called and says, 'They have some excellent faience and porcelain manufactures in Germany, but the English forms and glazes are so much superior that they sell before them all.' I have, indeed, rather too much business upon my hands, especially now that you have left me, for when we have been together some time, I feel but like *half myself* when we are separated ; but I am much comforted with the thought of having you here for good and altogether. We shall then do something to be talked of. . . Poor Ben [Byerley], I hope he has repented and is forgiven by this time. Love has very different effects upon different subjects ; but all follies arising from that cause will meet with every possible indulgence from you, who have the justest and most elevated notions of that sublime passion which leads us, even the strongest of us, captives at its will."

"I have just returned," he says, "from Etruria, where the workmen are busy with vases. I have enough to do to make the pots and manage the pot-makers, though man for

man I would rather have to do with a shop of potters than painters. While I have been at Etruria, they have had here [at Burslem] Lady Gower, Lady Pembroke, Lord Robert Spencer, and others to breakfast. This is the second time the Trentham family have been here while I was absent, but it cannot be helped."

In an appendix to the same letter to Bentley in London Wedgwood says :

"Trouble me, indeed ! You cannot think how happy you make me with these good, long, affectionate, and instructive letters. They inspire me with taste, emulation, and every thing that is necessary for the production of fine things, and I hope in a few weeks to show you some of the effects of your excellent advice. . . Oh, what a feast I have by this post ! Thank you for it, my dear and well-beloved friend. . . Farewell, and believe me evermore,

"Yours, J. W."

"I think pride—a certain kind of it and to a certain degree—is productive of a world of good among us mortals, who stand in need of every incentive to great and good actions. . . I will engage to supply you with vases enough for all the good painters in England. You say you can sell a wagon-load a week. If you sell that quantity during the season, you must have ten wagon-loads of painters to finish them."

Toward the end of 1769 Wedgwood was so busy with the manufacture of vases that he declined to accept any more orders. He directed Bentley, then in London, to refuse or postpone them until the works at Etruria could be properly finished for their execution. William Wood and Denby were engaged in making medallions and bas-reliefs from the gems and intaglios. Bentley would have a share of them ; but they must proceed methodically.

Wedgwood paid another visit to Bentley to arrange some matter concerning the house at Chelsea ; and after the agreement had been settled he returned to Burslem, or rather to Etruria, at the beginning of November, 1769. Wedgwood thus cheerfully communicated his reception at his new house to his friend Bentley :

“ We were three days upon the road . . . but at the last stage, Etruria, I was rewarded for all the risk and pains I had undergone during a tedious, long, and dirty journey. I found my Sally and family at Etruria ! just come there to take possession of the Etruscan plains and sleep upon them for the first night ! Was not this very clever, now, of my own dear girl's contriving ? She expected her Joss on the very evening he arrived, had got the disagreeable business of removing all over, and I would not have been another night from home for the Indies !

“ To-night we are to sup 120 of our workmen

in the town-hall, and shall take up our lodgings at Burslem. . . I do not know when I shall write again. The settling of these new hands will find me a world of employment."

Wedgwood desires Bentley to send him gold precipitate for rose-color, and gold powder. "I am in immediate want of fine smalts and ultramarine."

A great deal of work had to be done and money spent at Etruria before the works and the houses for the accommodation of the workmen and their families were completed. Wedgwood increased the number of his lathes. "I have committed," he said, "a sad robbery upon my works at Burslem. I have taken James Brown to Etruria, the only turner of good things I had at Burslem. We have not an engine-turner left there now. Poor Burslem! poor cream-color! They tell me I sacrifice all to Etruria and vases!" But Wedgwood had no alternative. He had received legal notice to quit the Brick House premises; the landlord himself intended to occupy them.

Then about money. Of course the estimates were greatly exceeded. Wedgwood wrote to Bentley that he required more money, materials, and hands to finish the buildings. "I want at least three thousand pounds for the purpose—not a farthing less; so you must either *collect* or take a place for me in the *Gazette*." After the buildings for the manufactory and the

houses for the workmen and their families, there was his own mansion, Etruria Hall, to be erected. His family had for some time occupied the house intended for Mr. Bentley, but which he never occupied. In the meantime the other buildings went forward, and the kilns were built by degrees.

Money, however, was found; houses were built; Etruria Hall was proceeded with, the grounds being under the direction of Capability Brown. The mansion, when completed, was a fine and roomy building, looking to the south, with a lake in front, and surrounded with a true English garden. Dr. Darwin, when writing to Wedgwood, said that Captain Keir of Birmingham admired the plan of the house and grounds, and said it was fit for the dwelling of a prince.

But the manufactures conducted at Etruria were the prime consideration. The first works used there were the Black Works, so called from the manufacture of the black basalts. But Wedgwood went on from one ornamental work to another. The demand for vases continued to increase, in various forms—original as well as copied from the antique, medallion bas-reliefs, intaglios of many descriptions, and portraits of distinguished persons, some of which—those, for instance, executed by Hackwood—are quite historical.

Wedgwood and Bentley were great oppo-

nents of the slave trade, and one of their earliest productions at Etruria, most probably modelled by Hackwood, was a chained negro in a supplicatory attitude with a motto round it of: "Am I not a man and a brother?" This was one of their most popular productions at the time it was issued.

Wedgwood occasionally went to London to see and interview his partner as to the state of affairs. Bentley drove Wedgwood about in the chariot and pair which he now possessed. Among the visits which they paid was one to their Majesties the king and queen in order to present some bas-reliefs which the queen had ordered, and to show some of their recent improvements in the manufacture of vases. The interview was satisfactory in every respect. Bentley wrote from Chelsea to his Liverpool partner (17th December, 1770): "The king is well acquainted with business, and with the characters of the principal manufacturers, merchants, and artists; he seems to have the success of our manufactures much at heart, and to understand the importance of them. The queen has more sensibility, true politeness, engaging affability, and sweetness of temper than any great lady I ever had the honor of speaking to."

Wedgwood, however, did not rely much upon royal favors. He depended mostly upon himself and his constant efforts to improve his

manufactures. He would not tolerate indifference or idleness. Every thing must be done in the best style. "In my first essays upon vases," he said, "I had many things to learn myself, and every thing to teach the workmen, who had not the least idea of beauty or proportion in what they did." When he went through his workshops and found a plate, a teapot, or a vase or candlestick not properly made, he would take up the stick on which he usually leaned, and break it to pieces, saying: "This won't do for Josiah Wedgwood!"

With him the ruling motive was intense perseverance. He studied chemistry with a view to the improvement of his manufactures. He tried experiments on clays of all sorts, mixing them with earths of different colors. And yet during this period he was laboring under illness which might have depressed his spirits. But he bore up against every thing. He employed new artists, and arranged new models of Greek statues and medallions from ancient gems.

At the beginning of 1770 he was building new ovens. He had thirty men employed in making vases, and they had to be constantly superintended. There was also the modelling of Day as a companion to Night, and the finishing of Apollo and Daphne, of which works Bacon was the modeller. While giving instructions to his many artists and workmen, Wedgwood himself was suffering from the complaint

in his eyes. "It is just dark," he once said, "and I am absolutely forbidden to write or read by candle-light." He began to fear continual darkness; he was even afraid of his brain becoming affected. Still he held on his way, and "steered right onward."

In case of his worst fears being realized he wrote to Bentley, stating that he wished him to learn the art of pot-making under him, so that in the event of his death the art might not die with him. When he ought to have gone to London for an oculist's advice about his eyes, he had to postpone the journey on account of his workmen. "I have 150 hands at Etruria, as well as others at Burslem, and how to leave them without a head I do not know. I have five hundred pounds' worth of vases in the oven. I packed upward of twelve hundred pounds' worth at Burslem last year, and am nevertheless as poor as a church mouse."

In the midst of his troubles his faithful and devoted wife went to Spen Green, in Cheshire, to nurse her father during an attack of fever, and the loss of his companion tried him sorely. He went, however, to join her there during a few days in the depth of winter. On the 10th of January he was at Spen Green, weather-bound, while the snow was falling very heavily, but ere long the recovery of the invalid enabled Wedgwood and his wife to return to Etruria.

At the same time, apart from these drawbacks, the business had been very prosperous. Continuous orders were coming in; there was still the rage for vases; the demands for the queen's ware were steadily rising; and there seemed, provided his health were preserved, a sure prospect of an eventual fortune.

CHAPTER XIV

PORTRAITS—MEDALLIONS—ARTISTIC WORK

IN the pre-Wedgwood days, when England was for the most part dependent for its supply upon the earthenware manufacturers of Delft, in Holland, and the porcelain manufacturers of Limoges and Sèvres, in France, that country had comparatively little market for its fictile ware in any foreign country. But now there was a large and increasing demand for English pottery.

“And do you really think,” Wedgwood wrote to Bentley in September, 1770, “that we might make a complete conquest of France? Conquer France in Burslem! My blood moves quicker; I feel my strength increases for this conquest. Conquer France by pottery ware! Pots,” continues Wedgwood, “how vulgar it sounds!” Yet he was supported by Boulton of Soho, who told him how the French were buying vases in London—how they took them over to Paris, mounted and ornamented them with metal, and sold them to milords Anglais as the greatest rarities. “You remember,” says Boulton, “we saw many such things at Lord Bolingbroke’s which he brought over with him from France.”

With respect to ordinary ware, the demands for Wedgwood's manufactures were constantly increasing in France, Italy, and over the Continent generally, as well as in North America and the West Indian islands. See what Faujas de Saint Fond, professor of geology in the Museum of Natural History, Paris, says of the superior merits of Wedgwood's ware in his "Travels in England": "Its excellent workmanship, its solidity, the advantage which it possesses of withstanding the action of fire, its fine glaze, impenetrable to acids, the beauty, convenience, and variety of its forms, and its moderate price, have created a commerce so active and so universal that in travelling from Paris to St. Petersburg, from Amsterdam to the farthest point of Sweden, from Dunkirk to the southern extremity of France, one is served at every inn from English earthenware. The same fine article adorns the tables of Spain, Portugal, and Italy; and it provides the cargoes of ships to the East Indies, the West Indies, and America."

Wedgwood was also greatly indebted to Sir William Hamilton for his researches and discoveries in connection with ancient art. While ambassador at Naples, he encouraged and supported the investigations at the buried city of Herculaneum. In 1766-67 he published his "Antiquités Etrusques," which furnished Wedgwood with many of his patterns for Etruscan

vases. At a future period of his life Hamilton was a frequent correspondent with Wedgwood in his efforts to improve English art. Sir William's first publication will remain a monument of his patriotism and his taste ; but it could not have been productive of its full and proper advantages in improving the general taste without a multiplication and diffusion of accurate copies of the beautiful originals. And this Wedgwood, by his industry and discoveries, was enabled to perform with advantage to himself and the public.

The execution of such a work presented difficulties which were at that time believed to be insurmountable. The vases of ancient Etruria were painted with durable colors burned in by fire, but perfectly free from the glossy or shining aspect of enamel paintings ; and the application of these colors appears to have been, even in the time of Pliny, one of the lost arts of preceding ages. Wedgwood never would have attempted the rediscovery of the lost art if some previous experiments of his own had not given him a glimpse of success, which was at length, by perseverance, completely attained. His colors were fully as beautiful as the originals, and susceptible of greater variety ; like these also they possessed the advantage of never spreading in the fire or running out of drawing, as all enamel colors must do, in a greater or less degree, in conse-

quence of their vitrifying and melting upon the piece.

For this discovery Wedgwood took out a patent—the only patent he ever registered. He had a dislike to patents, for the defence of patents against pirates required the expenditure of more money than they were worth. His object was to go ahead, and keep in advance of the pirates by his new improvements and discoveries. It was more by the advice of his friends than from his own unbiassed judgment that he took out this special patent. He was content with the advantages he had already acquired, and was better pleased to see thousands made happy by following him in the same career of industry than he could be by any exclusive enjoyment for himself. He was opposed to patents on another account: because, in most cases, while they tied up the hands of our own countrymen, they laid the discovery open to any foreigners who might think it worth their while to take them up, and propagate them to their own advantage, and to our loss. Nevertheless, Wedgwood took out this his only patent, and he was afterward called upon to defend it.

Of the “first fruits of Etruria,”—formed by Wedgwood on the potter’s wheel, and the wheel turned by Bentley,—some were deposited in the foundation of Etruria Hall, and the rest were sent to London, but not for sale. When the vases were called for by the public in large

quantities, a work was established at Chelsea under the direction of Bentley, who collected a large number of artists for their preparation. An immense number of the vases was sold, both at home and abroad, and nearly every museum possesses specimens, showing the state of the fictile art in England at that period.

The painted Etruscan ornaments were becoming familiar to the public eye, as the large demands for vases made them comparatively common; and, as their sale began to decline, Wedgwood availed himself of his large supply of artists to start a new manufacture. His discovery of the jasper porcelain enabled him to copy another branch of ancient art—that of modelling cameos, or heads and artistic figures engraved in relief.

Professor Church, in his admirable paper on Josiah Wedgwood in Hamerton's *Portfolio* for March, 1894, says that it was Wedgwood's "appreciation of antique gems cut in onyx and niccolo that led him to invent the most original and the most beautiful of all the ceramic materials with which he worked. This was the jasper body, or jasper paste. Though it may be roughly described, when in its simplest form, as opaque and white, its opacity and whiteness were susceptible of considerable variation. Sometimes it has the deadness of chalk, but the finer varieties possess the delicate hue and faint translucency of ivory or

vellum. Wedgwood and his artists took advantage of this translucent character of the white jasper, as it allowed the color of the ground to appear in a slight degree through the thinner parts of the cameo reliefs, and thus suggested, as in some draperies, the idea of a fine and light texture. On the other hand, there were many subjects and styles of treatment where any marked degree of translucency in the material used for the reliefs was of decided disadvantage; here the more opaque varieties of the jasper body were preferred. The smoothness of surface which this ware, as made by Josiah Wedgwood, almost invariably possessed is delightful at once to the senses of touch and sight, and, moreover, it affords one of the best criteria for distinguishing old work from new. It was caused chiefly by the extreme fineness to which the components of the jasper body were reduced, but the exact adjustment of the temperature of firing the ware to its composition doubtless influenced the result."

This material was called jasper from its resemblance to that stone. The jasper-ware was made of white porcelain bisqué, and was susceptible of receiving colors throughout its whole substance, but more especially of being stained with fine mazarine blue. This property of receiving colors, which no other body, either ancient or modern, has been known to possess, rendered it peculiarly fit for cameos, portraits,

and all subjects in bas-reliefs, as the ground may be made of any color throughout, the raised figures being of a pure white.

“The peculiarity in chemical composition,” says Professor Church, “which marks out the jasper-ware body from all other ceramic pastes was brought about by the introduction of a compound of the element barium.” This is chiefly found in the form of sulphate, the mineral being found abundantly in Derbyshire, where it is known as cawk, heavy spar, and barytes. Wedgwood had been experimenting on the mineral as early as the year 1773. By successive experiments he perfected his invention. He afterward invented his “jasper-dip,” in 1777, in order to economize the costly use of cobalt; though by its employment the most delicate and refined effects were produced.

Nothing can long remain secret in the potteries. The workmen soon spread about any new mode of manufacture. Wedgwood preserved his secret for about twelve years; but it was at last imitated by one Turner, though from different materials; and it was in the end generally adopted in Staffordshire, though with very inferior results, by other manufacturers. It is rather remarkable that this manufacture was carried on successfully for more than twelve years before anything of the kind had been executed by any other person. Wedgwood

seemed to have been more attached to this than to any other part of his productions, and to have had its success more thoroughly at heart ; probably from the early bent of his genius, which led him to imitate in clay whatever object happened to engage his attention. He had made considerable advances in it before he had access to the models still to be found in modern Rome, and while he had no other assistance than that of the artists whom he himself had taught ; but when, at considerable expense, he had procured copies or casts of the most celebrated bas-reliefs, he made vases and other artistic works which obtained for his productions a distinguished rank among the fine arts of the age.

The amount and variety of work done by Wedgwood almost exceed belief. He never absolutely copied. Though obtaining his first idea from the antique, his work was for the most part original. He varied his forms, adding many beautiful variations in the flowers and festoons which ornamented his jars and vases. He produced candlesticks, buttons, flower-pots, sphinxes, tritons, dolphins, crouching lions, at first in black basalt, and afterward in jasper. He went on from one ware to another, always improving them. John Coward was his principal modeller, and David Rhodes his principal enameller, the latter remaining with the firm until his death in 1777. Hackwood was prin-

principal modeller of the heads of men of distinction and genius.

In his jasper-ware he produced many works of great artistic merit. In a future chapter the medallions of Flaxman, perhaps the greatest of English sculptors, will be referred to. Wedgwood's aim was to produce not only the largest quantity, but the best quality, of the goods which he offered for sale. He went over his workshops and watched the workmen carefully. They knew the peculiar thud of his wooden leg as he mounted the stairs leading to the workshops. He always carried a stick because of his lameness. When any vessel failed to satisfy him, because of its want of geometrical proportions, he would take up his stick and at once break it to pieces.

He was greatly influenced by the advice of his lady friends. While producing his pyramidal flower-pots, he consulted Miss Fothergill, the eminent botanist's sister, as to their ornamental decoration. She was almost as good a botanist as her brother. "I speak from experience in female taste," he wrote to Bentley, "without which I should have made but a poor figure among my pots, not one of which, of any consequence, is finished without the approbation of my Sally."

Wedgwood was also greatly indebted to Mrs. Southwell for her excellent hints about the decoration of his ornamental flower-pots. "She is

a charming woman," he wrote to Bentley; "I am more and more in love with her every time I see her; and, having such a mistress in the science of flower-pot dressing, I hope our future productions will show that I have profited accordingly." He was also helped by older and more illustrious patrons: Lady Dover and Lady Teignham were ladies of great taste, and cheerfully assisted Wedgwood in his efforts in flower-pot and brooch decoration.

To forward his views as to decorative improvement he requested Rhodes to advertise again, and invite any hands that had been employed in painting figures, flowers, jars, or other decoration on china to apply to him in Little Cheyne Row, Chelsea, where they would find profitable employment. "What has become," he wrote to Bentley, "of your scheme for taking in girls to paint? Have you spoken to Mrs. Wright? Mr. Coward, too, said he could tell you of some fan-painters. You observe very justly that few hands can be got to paint flowers in the style we wish them to be done—I may add, nor any other work we do. We must *make them*. There is no other way. We have stepped forward before the other manufacturers, and we must strive to train up hands to suit our purposes. Where, among our potters, could I get a complete vase-maker? Nay, I could not get a hand through the whole pottery to make a table-plate without training him

up for that purpose ; and you must be content to train up such painters as offer, and not turn them adrift because they cannot immediately form their hands to our new style, which, if we consider what they have been doing all their life, we ought not to expect from them."

Wedgwood proceeded to press Bentley about his proposed drawing and modelling school for the purpose of training up artists. He would employ young boys and girls, and set them drawing and modelling until they were proficient ; and when any new modellers were wanted, draft them out of this school. In the meanwhile Wedgwood sent some new painters to London from Etruria. Some of them went by wagon ; Mr. and Mrs. Wilcox were a week on the road, with their pencils and brushes tied in a bundle. Those who went by the lumbering coach were three days on the road. What a difference in the rate of travelling nowadays !

We have already said that Wedgwood aimed at producing the largest *quantity*, as well as the best *quality*, of the goods which he offered for sale. In one of his catalogues he said : "A competition for *cheapness*, and not for *excellence of workmanship*, is the most frequent and certain cause of the rapid decay and entire destruction of arts and manufactures. . . This observation is equally applicable to manufactures and to the productions of the fine arts ;

but the degradation is more fatal to the latter than the former, for, though an ordinary piece of goods for common use is always dearer than the best of the kind, yet an ordinary and tasteless piece of ornament is not only dear at any price, but absolutely *useless* and *ridiculous*. . . The proprietors of this manufactory do not produce works for those who estimate them by their *magnitude*, and who would buy pictures at so much a foot. They have been happy in the encouragement and support of many illustrious persons who judge of the works of art by better principles ; and so long as they have the honor of being thus patronized they will endeavor to support and improve the quality and taste of their manufactures.”

Down to the discovery of the jasper-ware by Wedgwood his goods were mostly *earthenware*, and this was shortly after changed for its superior, *porcelain*. In a future chapter we shall describe soft and hard porcelain ; because Wedgwood afterward made a journey to Cornwall in search of the material. He continued employing modellers—Tassie on Apollo and Daphne ; Bacon on Night and the God of Day ; Mrs. Landre on Neptune and a large sea nymph for a pair of candelabra. He contrived many of these inventions in order to provide employment for his artists on the declining demand for the Etruscan vases. The public, he said, were becoming surfeited. He was satisfied,

however, as a large demand continued to exist for his useful ware.

On the 31st of May he wrote to Bentley of what he called St. Amputation Day. He must have been mistaken, as his leg was amputated on the 8th of the month. Some of his ornamental ware failed. "I condole with you [Bentley] on the return of your elephant, and will send you no more of such cumbrous animals. For, as the lady said, I fear we made a bull when we first made an elephant. I have given over the thought of making any other color but queen's ware. The white ware would be much dearer, and, I apprehend, not much better liked. The queen's ware, while it continues to sell, gives quite as much business as I can manage."

Notwithstanding the failure of the ornamental ware, Wedgwood wrote to Bentley on the 2d August, 1770: "In Ireland there seems to be a violent *vase mania* breaking out. We must take a room in Dublin and conquer the Irish by our vases. The Duke of Leinster is in raptures with a pair of our vases given to him by the Duke of Richmond." "We are making two or three Rockingham vases. They are enormous things—a yard high, and will be thirty-one inches when fired. Pray for our success, for they are perilous goods, and have many chances against them. But they are a sacrifice to Fame, and we must not look back."

Wedgwood got another order from the king for a new table-service, and was allowed to exhibit it for a month. This improved his reputation and his business. He was not insensible to reputation. To Bentley he said: "Let us make all the good, fine, and new things we can; and so far from being afraid of other people getting our patterns, we should glory in it, throw out all the hints we can, and, if possible, have all the artists in Europe working after our models. This would be noble, and would suit both our dispositions and sentiments much better than all the narrow, mercenary, selfish trammels. . . Have you forgotten how our hearts burned within us when we conversed upon this subject on our way from Liverpool to Prescott? We were then persuaded that this *open, generous* plan would not only be most congenial to our hearts and best feelings, but in all probability might best answer our wishes in pecuniary advantages. . .

"When the nobility witness our bestowing so much pains and expense in the improvement of a capital manufacture, nay, in creating a new one, and that not for our particular emolument only, but that we generously lay our works open to be imitated by other artists and manufacturers for the good of the community at large, this would certainly procure us the good will of our best customers, and place us in an advantageous light in the public eye. . .

With respect to rivalship, we will cast all dread of that behind our back, treat it as a base and vanquished enemy, and not bestow another serious thought upon it."

This was really a noble and generous mode of action. It was agreed to by Bentley, as well as by Matthew Boulton of Soho ; and it was in this spirit that the manufactures of Etruria and Soho were carried on.

In 1770 we find Wedgwood bringing out the Infant Hercules and ~~the~~ Somnus, or Sleeping Boy, an exquisite subject modelled by Coward from the antique ; and the Autumn (a boy) and Neptune, modelled by Hoskins. These were mostly of black basalts. Wedgwood was still troubled with his eyesight. He could not write by candle-light, and every moment of the day-light was absorbed in overseeing the vase-makers, the statuaries, the potters, and the other workmen at the manufactory. He was still busy with the service for his Majesty, and with the large Rockingham vases.

"Do not think," he wrote to Bentley, "by what I have said, that my eyes are worse, but I am sensible of my danger, and the last attack may be sudden and not give me an opportunity of communicating many things which I would not have to die with me. I know how ill you can be spared from the rooms, but I think it will be better to suffer a little inconvenience for the present than leave you immersed in a busi-

ness and not master of the principal part of it." Wedgwood still wished Bentley to be at Etruria to learn the secrets of the trade. But his gloomy foreboding remained unfulfilled. His wife returned to him from Spen Green. His old surgeon, Dr. Bent, removed his disease,—which was, it seems, a liver affection,—and he was able before long to resume his usual business career.

Wedgwood was not only troubled with his eyes, but with his artificial leg. He could not attend a meeting with Boulton and Keir at Birmingham because of some injury to his pin leg. Wedgwood wrote to "Athenian" Stuart,—one of his intimate friends,—that he was able to go abroad again, "though," he added, "I am not fond of doing so in frosty weather, being not so expert a footman as I have been, and a slip or accident to my better leg might lay me up for good and all."

His business avocations never interfered with Wedgwood's love for his family. In April, 1771, was born his fourth and last son, Thomas. To amuse his children he bought a barrel-organ, which played many tunes. "The organ arrived safe," he wrote to Bentley, "and a most joyful opening of it we have had. About twenty young sprigs were made as happy as mortals could be, and danced and lilted away. It would have done your heart good to have seen them. I wish we had had your sprightly niece with

us ; but give my love to her. When we send the organ to town again, it shall be sent to Chelsea for a week or two for her amusement."

Sir William Hamilton, British ambassador at Naples, a great friend and promoter of art, published a series of splendid volumes on Etruscan, Greek, and Roman antiquities, from which Wedgwood copied many of his Etruscan vases. In June, 1773, Sir William addressed a letter from Naples to Wedgwood and Bentley as follows :

"GENTLEMEN : AS I have nothing more at heart than to contribute, as far as I can, toward the advancement of the fine arts in Great Britain, and as your manufacture has indeed already done great honor to my poor endeavors, I have the pleasure of sending you a few drawings of most elegant-formed vases which are in the Great Duke of Tuscany's collection, and differ from those found in my collection. They are truly worthy of your imitation, and, as the originals are simply black with the ornaments in relief, your ware is capable of imitating them exactly."

Wedgwood proceeded to copy the vases. It may be added that Sir William Hamilton's valuable collection of Greek and Etruscan vases is now in the British Museum, together with many of the marbles dug up from Herculaneum,

now in the Townley Gallery of the same museum.

Hackwood, the modeller, was now busily employed. "I hope," said Wedgwood to Bentley, "that you have read Mr. Elers' fine letter. We are preparing to send down the heads of all the illustrious men in all the courts and countries of Europe to be immortalized in our artificial jasper."

The Paul Elers referred to was the father of Richard Lovell Edgworth's first wife. He was also the son of one of the brothers Elers who came into Staffordshire from Germany at the close of the seventeenth century.

The first heads produced were those of the king and queen. These were followed by portraits of Sir Philip Sidney, the Empress of Russia, the King of Prussia, Earl Gower, Lord Mansfield, Lord Chatham, the King and Queen of Portugal, the Duke of Bridgewater, "Athenian" Stuart, and many others.

Domestic troubles intervened. Mrs. Wedgwood had a severe attack of rheumatism. She was bled and blistered. When she was well enough to leave Etruria, she was sent to Buxton. She was very ill on her return, and was "wasted almost to a skeleton, scarcely able to walk a few yards." Dr. Darwin saw her from time to time when passing on his rounds of visits. Besides the illness at home, Wedgwood was inexpressibly sorry to hear of Bentley's

illness in London. Wedgwood urged that he should be sent into the country as soon as possible.

Wedgwood was exceedingly provoked and humiliated by the war between England and America. "I am ashamed," he said, "of the absurdity, folly, and wickedness of the whole proceedings with America. The king and the House of Commons are entirely to blame for it." "Somebody," he added, "should be made to say distinctly what is the object of the present most wicked and preposterous war with our brethren and best friends." At a later period (April, 1778) he wrote to Bentley: "How could you frighten me so in your last letter? It was very naughty of you. I thought of nothing less than some shelves, or perhaps a whole floor, of vases and crockeries had given way, and that you had been carried down with them! But on reading a little further I found that it was only the nation that was likely to flounder into a French war; and, having been fully persuaded of this event for a long time past, I recovered from my shock and blessed my stars and Lord North that *America was free*.* I rejoice most sincerely that it is so, and the pleasing ideas of a refuge being provided for those who choose rather to fly from than submit

* This probably refers to the defeat of the British Army—Burgoyne surrounded and forced to capitulate at Saratoga—thus thwarting the policy of Lord North.

to an iron hand of tyranny. This has raised so much hilarity in my mind that I do not at present feel for our own situation as I may do the next rainy day. We must have more war, and perhaps continue to be beaten—to what degree is in the womb of time. If our drubbing keeps pace with our deserts, the Lord have mercy upon us!”

Here is the state of Staffordshire in 1778: Wedgwood writes to Bentley as follows: “For some time past the environs of Newcastle have rivalled those of London for the number and audacity of highway robberies, and Etruria does not yield at all to Turnham Green. The workmen dare not go to their houses in the evenings but in troops, and armed with clubs. On Monday night last there were three highway robberies between this place [Etruria] and Newcastle. I got some knowledge of the gentlemen on Tuesday morning, and sent some of my people in pursuit of them, who brought me in two of the robbers; a third is brought in this morning, and we have sent out in pursuit of two more. Those we have in custody have confessed various robberies, and those of their accomplices.” At Stafford, where the robbers were tried, two of them were sentenced to be hanged, and the others were acquitted for want of sufficient evidence.

In May, 1778, Wedgwood's brother-in-law, the Rev. Mr. Willet, died after a long illness.

He was calm, serene, and sensible to the last moment. Wedgwood wrote to his friend Bentley :

“The decline and weakness of old age afford but a melancholy prospect to those who feel themselves approaching just to the same state ; and from the observations I have made I find the oldest men, philosophers, nay, even Christians, and the firmest believers, cling as fast to this wicked world as younger folks and those who have their doubts concerning futurity. Well, since it is so and will be so, let us, my dear Bentley, enjoy and diffuse among our friends every real happiness within our power, and not torment ourselves with useless anxieties nor waste an hour of the very small portion of time allotted to us here. I know those are your sentiments, and I will endeavor to make them more and more those of your ever affectionate friend,

JOS. WEDGWOOD.”

CHAPTER XV

GROWAN CLAY — KAOLIN — BÖTTGHER — COOK-
WORTHY—MANUFACTURE OF PORCELAIN

THE rooms in Newport Street were too small for the exhibition of Wedgwood's more important works. The principal part of them were accordingly removed to Portland House, Greek Street, Soho, then an important West End quarter. There Bentley was in his glory. "Be so good," wrote Wedgwood to him, "as to let me know what is going forward in the great world; how many lords and dukes visit your rooms, praise your beauties, thin your shelves, and fill your purses; and if you will take the trouble to acquaint us with the daily ravages in your stores, we will endeavor to replenish them." Besides his dukes and duchesses, Bentley was visited by more distinguished persons. The king and queen inspected his storeroom; and among his other visitors were "Athenian" Stuart, Dr. Solander, and Sir Joseph Banks.

Bentley was a most courtly man. He was handsome in person, genial in manner, a good scholar, and knew many languages. None could better than he set off Wedgwood's ornamental

ware, tell anecdotes of the vases, bas-reliefs, and cameos with which the rooms were stored; and he thus delighted the ladies, who not only admired the relater, but bought his ornamental wares.

“Mrs. Byerley,” again wrote Wedgwood from Etruria, “has just returned from London, and brings a strange account of the goings on in Newport Street: no getting to the door for coaches, nor getting into the rooms for ladies and gentlemen; and vases, she says, are all the rage.” The rage for vases as well as for queen’s ware fell off; but Wedgwood endeavored to find markets for the new productions. He even thought of employing a rider to go about the country and tout for orders. One of the wares he thought of producing was a new variety of basalts. “I am well assured,” he wrote to Bentley, “that painted black ware with encaustic colors will have a great run.”

The painted black ware, however, was not very successful. Wedgwood continued his efforts to discover the clay most suitable for crucibles, retorts, mortars, and pestles. His experiments occupied a considerable time, and it was not until he ascertained that the clay from Cornwall was the most suitable that his mortars obtained the preference over all others. From the tests which they withstood at the Apothecaries’ Hall they acquired a reputation which has lasted to the present day.

The Cornish clay,—called also the porcelain or growan clay,—was suitable for many purposes for which the Staffordshire clays were unsuitable. It was sent by sea from St. Austell to Liverpool, and from thence the materials for hard porcelain, mortars, crucibles, and pyrometers were sent on to Etruria to be worked into their proper forms. Hard porcelain was of so much importance in the manufacture of china that it is necessary to make some special reference to it. Moreover, Wedgwood afterward made a driving tour to the west of England in search of this porcelain clay.

Porcelain was manufactured in China,—from which country it obtained the name which it still retains,—long before it was known in Europe. Hard porcelain is said to have been invented at Sin-ping, in China, as long ago as 185 years before Christ. It was imported into Europe through means of the Arabs, and was sold at very high prices. Kaolin was the name given by the Chinese to the fine white clay which they use in making their porcelain. It is produced by the decomposition of a granite rock the constituents of which are quartz, mica, and feldspar—the whole having gradually mouldered into kaolin by the joint action of air and water.

A very similar clay occurs in the south of Cornwall, produced by the decomposition of pegmatite—a granite in which there is scarcely any

mica and very little quartz. A similar clay is found at St. Yrieux la Perche, near Limoges, in France; at La Doccia, near Florence; at Capo di Monte, near Naples, in Italy; and near Madrid and Oporto, in Spain and Portugal. Another discovery of white kaolin was made at Aue, in Saxony, in 1709, to which a remarkable story is attached.

Porcelain is soft or hard, but the latter is the more important. Soft porcelain was first manufactured at St. Cloud in 1695, but after the discovery of hard porcelain by Böttgcher at Meissen, near Dresden, the manufacture of soft porcelain was discontinued in France, and nothing but hard porcelain was thereafter manufactured at Sèvres. The story to which we refer is as follows :

John Frederic Böttgcher was born at Schleiz in 1685, and at twelve years of age he was bound apprentice to an apothecary at Berlin. He occupied many of his leisure hours in chemical experiments. Alchemy was then in vogue, and after several years Böttgcher pretended that he had been able to convert copper into gold. The news spread abroad that the apothecary's apprentice had discovered the grand secret of which every alchemist was in search, and crowds came from all quarters to see the "Young Gold-Cook." Perhaps it may have been to the apothecary's advantage to notice the wonder excited by his apprentice.

Frederick I., King of Prussia, was very much in want of money at the time. He desired to appropriate at once the great converter of copper into gold. The king had an interview with Böttgher, who presented him with a piece of gold which he pretended had been converted from copper. The king proposed to secure the apprentice and imprison him in the strong fortress of Spandau in order that he might continue his alchemical operations in favor of his Majesty's needs. Böttgher heard of the project, and, probably fearing detection, he fled from Berlin and took refuge in Saxony.

A reward of a thousand thalers was offered for Böttgher's apprehension, but on arriving at Wittenberg he placed himself under the protection of Frederick Augustus I., Elector of Saxony and King of Poland. The elector was quite as much in need of money as the King of Prussia, and he would not surrender his young alchemist. Böttgher was accordingly held a prisoner. He was conveyed to Dresden under charge of a royal escort and kept under strict guard.

After many attempts Böttgher failed to supply the wants of the elector. The copper he employed remained copper, and could not be converted into gold. In his despair he escaped and fled to Ems, in Austria, but the pursuers were close at his heels; they arrested him in his bed, and carried him back to Saxony.

He was imprisoned in the strong fortress of Königstein. The elector was now in great distress for money. Ten regiments of Poles were clamoring for their arrears of pay. The young alchemist was told that unless he could make gold he would be hanged!

But he was not hanged. He went on making experiments, but with no success. At length one of his wise friends came to him,—Walter von Tschinhaus, a maker of optical instruments and also an alchemist,—and said to Böttgher, still in fear of the gallows: “If you can’t make gold, try and do something else; *make porcelain!*” Some rare specimens of this ware had been brought from China by the Portuguese, and were sold for more than their weight in gold.

Böttgher at once acted on his friend’s hint. He began his experiments on clay, working night and day. After many failures some red clay was brought to him for the purpose of making his crucibles, and then he was set on the right track. This clay, when submitted to a high temperature, became vitrified and retained its shape. In texture it resembled porcelain, except in color and opacity. He had, in fact, accidentally discovered red porcelain, and he manufactured and sold it as porcelain.

He was aware, however, that the transparent white color was an essential property of true porcelain. Years passed, when another happy

accident came to his help. One day—in the year 1707—he found his peruke very heavy and asked his valet what was the reason. The valet said that the powder with which the wig was dressed consisted of a kind of earth that was much used for hair-powder. Böttgher at once thought that this might be the very earth of which he was in search. He at once experimented, and found that the principal ingredient of the hair-powder was *kaolin*, the want of which had so long formed an apparently insuperable difficulty in the way of his investigations.

This discovery proved of much greater importance than the young alchemist's proposal to convert copper into gold. Böttgher presented the first piece of hard porcelain to the elector in October, 1707. The elector was greatly pleased with it, and he resolved that the discoverer should be furnished with the means for perfecting his invention. Böttgher abandoned alchemy for pottery, and placed over the door of his workshop these words :

“Almighty God, the Great Creator,
Has changed a gold-maker to a potter.”

The porcelain which Böttgher manufactured being found to sell for large prices, the elector determined to establish a royal manufactory of porcelain. Accordingly a large series of buildings were erected at the Albrechtsburg in Meis-

sen. The porcelain manufactory was very successful, and the large profits soon provided the elector with the gold of which he was in search.

It is pitiful to think of the treatment to which Böttgher was subjected. He was always under strict guard. Soldiers were constantly about him. Two royal officers were put over him at the factory. He was treated as the king's prisoner. He was locked up nightly in his room, with a guard of soldiers outside to prevent his escape. In short, he was enslaved. No more inhuman treatment was ever awarded to an important discoverer. At last the poor fellow took to drinking, and eventually he died, quite broken down, in March, 1719, in the thirty-fifth year of his age.*

The merits of this great inventor were only publicly recognized a few years ago. On the 17th of October, 1891, a monument was erected to the memory of Böttgher at Meissen; yet 182 years before, in 1709, he had established the first hard porcelain manufactory in Saxony. We are late in recognizing the memory of our benefactors. In the same year a statue to Bernard Palissy was unveiled at his birthplace, Villeneuve-sur-Lot, on the 6th of July, 1891. Three hundred years before he died in the Bastille at the age of eighty. He was a Protes-

* A much fuller account of Böttgher is given in *Self-Help*.

tant, which was the cause of his imprisonment. The valiant, persevering old man died a martyr to his faith, though he was not burned at the stake.

The porcelain manufacture became so productive to the Elector of Saxony that his example was shortly after followed by European monarchs. Every care was taken at Meissen to preserve the secret ; but where many workmen are employed, no secret is safe. A workman named Stöfzel carried it to Vienna in 1722, where an imperial manufactory for the manufacture of hard porcelain was afterward established. Royal works were founded at Berlin, St. Petersburg, Munich, and at Sèvres, in 1755, under Louis XV., when the manufacture of soft porcelain was almost entirely discontinued.

The introduction of hard porcelain into England was due entirely to individual enterprise. No royal powers were conferred upon its first makers. Yet the narrative of its introduction is not without interest. Kaolin, or china clay, was discovered in Cornwall by William Cookworthy, a chemist and druggist at Plymouth. As early as 1745 his attention was directed to the subject of porcelain. He made experiments on the clays of Cornwall and Devon. He scientifically and carefully examined them. After long and varied experiments he discovered in 1768 that the materials for the manufacture of genuine porcelain existed at

Tregonnin Hill, in the parish of Germo, between Helston and Penzance ; and also in the parish of St. Stephens, between Truro, St. Austell, and St. Coloumb ; as well as at Boconnoc, near the family seat of Thomas Pitt, Lord Camelford.*

There is a traditional belief, says Mr. Jewitt, that Cookworthy first found the stone he was anxious to discover in the tower of St. Coloumb Church, which is built of stone from St. Stephens, and this led him to the spot where the stone was to be procured.† At all events, having made the important discovery, Cookworthy at once resolved to carry out his intention of making porcelain, and endeavored to secure the material for himself. For this purpose he went to London to see the proprietors of the land, and to arrange for purchasing the royalty. In this he succeeded ; and ultimately Lord Camelford joined him in the manufacture of china. It appears from a letter from that nobleman to Polwhele, the historian of Cornwall, that the two expended about three thousand pounds in prosecuting the work.

It may be mentioned that the Cornish clay resembles the Chinese kaolin. It is locally known as *growan*. It is found in the granite of several districts ; sometimes it contains talc

* Lord Camelford was the elder brother of William Pitt, Earl of Chatham.

† Jewitt's "Life of Wedgwood."

in place of mica, and is characterized by the partial decomposition of the feldspar. The China clay or porcelain earth requires to be carefully and constantly washed with running water until it is perfectly white. It is afterward consolidated, dried, and cut into oblong blocks, when it is sent to the nearest port and shipped to the potteries, there to be manufactured into china and the finer kinds of earthenware.

"The materials from the kaolin of St. Stephens," said Cookworthy when speaking of his manufacture, "burn to a degree of transparency without the addition of petunse.* Indeed, the materials from this place make a body much whiter than the ascatea, and, I think, full as white as the ancient china-ware or that of Dresden." Cookworthy established himself as a china manufacturer at Plymouth, where the buildings, called China House, are still to be seen.

Cookworthy, being an experienced chemist, paid much attention to the production of a good blue. He was the first in this country who succeeded in manufacturing cobalt blue direct from the ore. Some of the articles he produced were beautifully modelled from nature, such as salt-cellars, pickle-cups, and toilet-pieces in the form of shells and corals.

* The fine clay used by the Chinese with the kaolin in their manufacture of porcelain.

The china manufacture was tolerably successful in Cookworthy's hands, but it was very expensive. Coal being very dear, only wood was used for the heating of the kilns. And wood, too, was very costly.

The ware manufactured by Cookworthy at Plymouth consisted of dinner-services, tea- and coffee-services, vases, mugs, jugs, trinket- and toilet-stands, busts, single figures and groups, animals, flowers, birds, madonnas, and various other figures copied from foreign models. But, however beautiful Cookworthy's works were, as we have said, they were by no means profitable. After a few years Cookworthy took out a patent for the manufacture of a "kind of porcelain newly invented by himself, composed of moor-stone or growan, and growan clay." The patent was dated 17th March, 1768.

Cookworthy was resolved to make his porcelain equal to that of Sèvres and Dresden, both in body (which he himself mixed) and in ornamentation. For the latter purpose he procured the services of such artists as were available; and with the assistance of M. Saqui from Sèvres, an excellent painter and enameller, and Henry Bone, a native of Plymouth, he was enabled to turn out some very beautiful and excellently painted and enamelled specimens of Plymouth porcelain.

Cookworthy shortly after removed his works

to Bristol in order to be nearer the coal. There he carried on the manufacture of porcelain, but under considerable difficulties. He still continued to lose money. He and one of his partners, Lord Camelford, lost about three thousand pounds in the prosecution of the undertaking. Cookworthy was about seventy years old when he resolved to give up his manufacture. With the willing consent of his partners he made over, in May, 1774, the business and his patent rights to Richard Champion of Bristol, Cookworthy only reserving for himself a share of profit from the china clay used in the works.

In order to extend the period of the patent right a petition was presented to Parliament in February, 1775, applying for an act to extend the term of Cookworthy's patent for a period of fourteen years. The potters of Staffordshire strongly opposed the extension of the patent. Josiah Wedgwood was appointed their leader. He was opposed to patents generally. In the case of the growan clay of Cornwall he was of opinion that the extension of commerce, and especially of earthenware and china, depended upon the free use of the various raw materials which were the natural products of the country.

Notwithstanding Wedgwood's opposition, and the pamphlets and cases which he published against the extension of patent rights, the bill passed the House of Commons, through

the influence of Edmund Burke, almost unaltered. But when it reached the House of Lords, Lord Gower and several other noble lords, having met and specially considered the bill, determined to oppose it. The result was the introduction of two clauses—the first making it imperative on Champion to enroll anew his specification of both body and glaze within four months, and the second throwing open the use of the raw materials for potters for any purposes except the manufacture of porcelain. These modifications, though limited, proved of much advantage to the Staffordshire potters.

Champion spared no pains or expense in turning out the best quality of work, and he succeeded in producing an excellent body and a remarkably fine glaze. He produced some truly exquisite specimens of porcelain, both in design, in modelling, and in painting. But the Bristol manufactory was by no means a success. In about two years after obtaining the Act of Parliament Champion closed his works, and sold his patent right to a company of Staffordshire potters. They were men of good standing, and carried on their works at New Hall, Shelton. Champion himself removed for a time into Staffordshire. He then emigrated to South Carolina, United States, where he died.

CHAPTER XVI

WEDGWOOD'S JOURNEY INTO CORNWALL

THE introduction of the manufacture of china-ware into Staffordshire was mainly due to the exertions of Josiah Wedgwood in taking means for throwing open the use of the raw materials found in Devonshire and Cornwall to manufacturers of pottery in every part of the kingdom.

In order to make personal enquiries as to the places where growan stone or growan clay was found in Devonshire and Cornwall Wedgwood resolved in 1775 to make a journey into the south-western counties of England. He was accompanied by Mr. Turner, one of the earthenware manufacturers of Lane End, as well as by Mr. T. Griffiths, who was to be their agent, should it be found necessary to leave him behind them.

“As the country was new to me,” says Wedgwood in his *Commonplace Book*, “I took a few short minutes, in the chaise, of the various appearances of the country we passed through, which afforded a little amusement at the time, and may serve, perhaps, as an agreeable com-

panion in any future journey into the same places.”

The Memorandum Book and Commonplace Book, from which we select the following extracts, seem not to have been examined by any of Wedgwood's biographers. At least no notices of them have been published. Yet they are very curious documents, throwing considerable light upon the character of the great potter. Careful and cautious observation was his principal characteristic. The Commonplace Book gives, in his handwriting, a long account of the horse's foot; he describes its sole, its treatment, its proper shoeing, and so on.

He gives Mr. Smeaton's views on the expansion of metals, and Dr. Priestley's account of the different kinds of air. He records experiments on different kinds of cobalt, with observations on glazes, clays, zaffre, and nickel, and the method of producing various colors after firing.

In his Memorandum Book Wedgwood devotes whole pages to experiments on thermometers. His object was to ascertain the principle of certain clays diminishing in bulk by fire; his trials were very elaborate. He tried various mixtures of clays from red heat up to the strongest that vessels made of clay can support. He records that “some of the present Cornish porcelain clays seem to be the best adapted both for supporting the intensity and measur-

ing the degrees of heat." Eventually, Wedgwood published the results of his experiments; and he was elected a Fellow of the Royal Society while under the presidency of Sir Joseph Banks.

Wedgwood records many experiments "with a view to remedy the imperfections of flint glass for achromatic instruments." He published "An Attempt to Discover the Cords and Waviness in Flint Glass, and the most probable means of removing them." He made many experiments on the artificial crystallization of alabaster. Being always a close observer, he took up the study of geology. He could never be idle, even on his journeys from London to Etruria.

In his *Commonplace Book* he records the geological strata between London and Birmingham, as well as the nature and character of the vegetation through which he passed. At his own works he tested every thing. He would not accept the dogmas of others, but observed for himself. He possessed great power as an organizer. He kept receipts, for reference, on all manner of subjects—glazes, tinning of iron plates, varnish, plasters, and such like. He recorded in his *Commonplace Book* all the conversations of importance he had with distinguished persons—legislators, artists, and men of science. The potters of Staffordshire looked up to him as their head. They appointed him

their chairman, to watch over their interests in the commercial negotiation with foreign countries as well as at home.

To return to Wedgwood's driving tour into Cornwall to ascertain the places where the growan stone or clay was to be met with. No more agreeable journey could have been made. Such tours are out of date now. We rush rapidly through the country. The railway train passes through tunnels, deep cuttings, and the passenger sees little of the adjoining landscape. Wedgwood and his party left London on the 29th May, 1775. Their journey was through a beautiful country, and they made their observations as they passed along. They went through Guildford to Farnham; then into a richly cultivated country, through Blackwater village, over heaths and through woods, with charming residences in sight.

"It is impossible," says Wedgwood in his notes, "to pass through those finely varied scenes and comfortable haunts of men without wishing to spend more time among them than these hurrying chaises will permit. . . The fine picture is like a panorama; it is all around us—woods of every character, lawns, chases, farms, and hop-gardens." The towns and villages passed through were Hartley Bridge and Hartley Row (a venerable-looking village); Morrel Green, where there was a good inn, and they rested; Newnham, where a view was

taken opposite the church ; then to Basingstoke, celebrated for its siege during the civil wars ; the Downs then opened upon the travellers—"a noble feast" ; they passed Stockbridge and Old Sarum, and slept at Salisbury.

In passing through Wiltshire Wedgwood was surprised by the numerous remains of the dwellings, entrenchments, tumuli, and graves of the ancient British. All round the great plain of Salisbury were the remains of these ancient people ; and in the centre of the plain was Stonehenge, their great sacrificial temple. On the Downs were camps and entrenchments. At Chattles Doun, near Charborough, there were tumuli to the right and left. At Whitchurch an old camp was seen on the side of a hill, and two barrows were observed close to the road. There were short barrows and long barrows,—the former being the more ancient,—raised over the dead, long before the invasion of the Romans.

The party of travellers passed on to Dorchester—a station of the Romans, as its name indicates. But before the Roman invasion the place seems to have been of importance. There is a round amphitheatre near the town capable of containing some twelve thousand spectators. Some think it to be Roman, but others suppose it to be ancient British, as it closely resembles the British "rounds." But the most remarkable monument of the ancient British

is Maiden Castle, a few miles southwest of Dorchester, one of the finest and largest old camps in England. The outworks enclose an area of forty-four acres, and three lofty earthen ramparts surround it on the south. At Bridport, on the west, says Wedgwood, "every hill seems to have its camp." The barrows were innumerable. At Slatt "the first rock stone was seen."

The travellers passed through Stapleton, where there were "plenty of orchards," Charmouth, Axminster, Offwell, and Honiton, celebrated for its lace. No carts or wagons were to be seen here; every thing was carried on horseback. Then Exeter was entered, "a lovely neighborhood." Passing on through other villages, Wedgwood went to see a pot-work at Bovey Tracey. He discusses the difficulty of making pottery at that place, where the coal was bad and the workmen were clumsy. He describes the beauty of the country at Ivy Bridge. At a place called Ridgeway Wedgwood first saw the petunse or growan stone.

At Plymouth Wedgwood visited an old friend, Mr. Tolcher, who had sent him some specimens of cobalt. The party visited Mount Edgecumbe, and in a letter to Bentley (1st June, 1775) Wedgwood thus describes it: "We were upon the water several hours yesterday afternoon. Have you ever seen Mount

Edgecumbe? If you have not seen Mount Edgecumbe, you have seen nothing. We sailed twice past the terrestrial paradise, and such a sun-setting I have never beheld."

The travelling party could not long remain at Plymouth, and on the 2d of June they set out in search of the growan. They went by Burland Downs and Rubarrow Downs, when growan stone was again seen. They crossed the stream of water brought to supply Plymouth by Sir Francis Drake. As they proceeded into Cornwall they had some difficulty in understanding the dialect of the people. At Kettington they found the farmers ploughing with oxen. Barrows were still plentiful. At Liskeard the landscape views were splendid. Then they entered Boconnoc Down, near Lostwithiel. The estate of Boconnoc belonged to Mr. Pitt, afterward Lord Camelford, elder brother of the Earl of Chatham, who was born here. Here we must quote from the notes of Mr. Wedgwood :

"We now come to Mr. Pitt's seat, which is extremely rural and retired. We found him at home, and he took us a walk before dinner, down a sweet valley, with hanging woods on either side, and a clear purling stream below. . . . When we came to a fine old beech-tree in the bottom, by the side of the brook, the roots of which were visible in various folds above the surface, Mr. Pitt laid himself down and

repeated those fine lines from Gray's 'Elegy Written in a Country Churchyard':

“There at the foot of yonder nodding beech,
That wreathes its old fantastic roots so high,
His listless length at noontide would he stretch,
And pore upon the brook that babbles by.’

“The dinner-bell awoke us from our agreeable revery, and raised in us sensations of another kind, which we made haste to satisfy. After being entertained at Mr. Pitt's hospitable mansion for a few hours, with great hilarity and classic elegance, we parted in high good-humor and proceeded on our journey.”

Wedgwood proceeds to describe the neighborhood of Lostwithiel as “a charming country, full of fine hills and fruitful valleys, an arm of the sea running up between a chain of hills, which altogether conspire to compose one of the finest scenes a traveller can wish to pass through.” They were now in the midst of the growan stone district. Near St. Austell they found large quantities, and observed the white kaolin obtained by washing from the raw materials. They also went to St. Stephens, where the growan stone was prepared to supply the Bristol porcelain manufactory. At St. Coloumb they went to see the collection of Mr. Soper, apothecary, a very intelligent man, but they were disappointed. Earths, stones,

and clays were too mean to find a place in the museums of Cornish collectors.

At Truro the travelling party witnessed what they considered an extraordinary sight. Wedgwood thus relates it: "In one of our walks through the town we met a very numerous procession of females, all dressed out in their best garments. We were much struck with such a troop of young women marching in regular order. We enquired as to the cause of the procession, and were told that it was the annual meeting of two female clubs, who had associated for the same purpose as men do in this and other parts of the island—that is, to lay by a little money while they are in health and can spare it, to receive it again in time of sickness. I am sorry I cannot say much in favor of the beauty of the fair sex. Indeed, there were scarcely three faces in the two clubs that were tolerable."

At Redruth Wedgwood found growan clay in great abundance, and of a very white color. He obtained some specimens for experiment, believing the clay to be of the right sort. Being so near the Land's End, he and his companions determined to visit it, but the two chaises containing them were almost swamped by the drenching rain before they reached Penzance. On the 6th of June they went to the Land's End, about three miles distant. Growan clay was found on the way. A large quantity

had been shipped from Penzance for Bristol and South Wales, where it was used for furnaces. It was not white enough to be used for the manufacture of porcelain.

“At the Land’s End,” says Wedgwood, “we gazed for some time with a kind of silent awe, veneration, and astonishment at the immense expanse of ocean before us. It was indeed sublime. The weather was clear enough to enable us to see the Scilly Isles, about nine leagues distant. After a long and exciting view we left the spot. It was with a transport of joy that I now set my face homeward toward Etruria.”

The travelling party, however, did not go directly homeward. Wedgwood having still to make enquiries as to the white clay which he had heard was in the neighborhood, they started again from Penzance and journeyed westward. They saw Marazion (or Market Jew), crossed the sands, and climbed up to St. Michael’s Mount. From the summit of the castle they had a magnificent view landward and seaward. They descended and went to Ludgvan, then higher up to Treasso, higher still to Castle Andennis, in search of white clay, which they eventually found, with the help of Mr. Edwards of Treasso. They then passed Wheal Prosper and obtained some of the white clay on Lord Godolphin’s property. Samples of the various clays were obtained for the purpose of future experiments.

Being near the Lizard, they made a detour to see that wonderful geological formation. It is unnecessary to detail their visit to Kynance Cove, on the west shore of the bay, and Cadgewith, on the east. "The Lizard," observes Wedgwood, "was an extraordinary sight." But he was here on business as well as pleasure. He made enquiries as to the soap rock on Lord Falmouth's property, which at that time was leased to the Worcester China Company. However, several other landlords had soap rock on their property, and Wedgwood took some specimens away "in a pocket-handkerchief."

From the Lizard they returned by Redruth and Truro, examining for soap rock all the way. On the 10th of June they found a farmer, a Mr. Trethaway, who possessed a little estate adjoining Mr. Pitt's manor, and Wedgwood agreed with him for a lease. To use his words: "The farmer said he would lease us the stone and clay on the estate for so many years. He asked twenty guineas a year rent. I offered ten. He accepted it, and we had articles of agreement drawn up accordingly by Mr. Carthew, an attorney in St. Austell. This gentleman, when the business with Trethaway was finished, offered us more of the same materials on the same terms, or to sell us twenty or thirty acres of land with them in on our own terms. We ordered some of his materials to be sent to us,

and when we have tried them, we are to write him on the subject.

“Having now completed our business in Cornwall by having got a firm and secure hold of the raw materials upon reasonable terms, we left Mr. Griffiths, our agent, to conduct the business. We left St. Austell after dinner and slept that night at Liskeard, and the next day we set Mr. Tolcher down at his own house at Plymouth. The old gentleman was in general cheerful and good company, but, notwithstanding his age (he was in his eighty-seventh year), he had a good deal of the spoiled child in him, for if he had not his own way in every thing, there was no peace with him, either in the chaise or at the inns. . . . But when we came to Plymouth, he talked so much of accompanying us into Staffordshire that I believe a single invitation would have brought him with us.

“Mr. Tolcher enjoys a remarkable share of health and spirits for a man of his great age, and nothing flatters him so much as telling him how young he looks, and how many years he may yet expect to live. Indeed, he used to say that he had no notion of dying; he did not think he should die, for he had never felt any thing like it yet, having never had a day's sickness in his life; but he added: ‘Neither have I ever been once intoxicated with spirituous liquors.’”

While at Plymouth Wedgwood took another

look at Mount Edgecumbe, which he so much admired. He also examined the Isle of St. Nicholas, or Drake's Island, a strongly fortified rock at the entrance of the River Tamar; the harbor, the docks, the ships, the hospital, and whatever there was to be seen. He went to the Hoe to enjoy the unrivalled view from that lofty promenade. But time pressed, and Wedgwood must hasten back to Etruria. Yet he desired to see so much that was novel on his way homeward. Instead of returning to London he went northward through Wellington, Taunton, Bridgewater, and Glastonbury, in Somerset. Nothing pleased him more than the cathedral city of Wells, the fine old cathedral with its precincts and other buildings constituting a perfectly unique English city.

Wedgwood went northward through Bath and Gloucester, calling upon his friend Boulton at Birmingham on his way home, and thus finishing a very pleasant and profitable journey. He was, of course, received with joy and welcome by his loving wife and family at Etruria. He had long arrears to make up with his boys and girls, to whom he was deeply attached. We have already referred to his affection for his devoted wife, who not only cherished him during his illnesses, but conducted his correspondence while he was unable to attend to his ordinary business.

We may refer to some of his written inter-

course with his children. When in London, on one occasion, he wrote a long history of an imaginary journey to the metropolis to his "Dear Kitty." It was entitled "A Short History of a Long Journey to London, from a Papa in Town to his Good Child at Home." The history, which is written in the style of a loving father to his playful child, separated from her by several hundred miles, extends to six chapters in length. Some of it is very interesting. Not less interesting were his communications with his boys, over whose education he watched, encouraging them, and assisting them with his immense information. We may quote one of his letters to his eldest son John, or, as his father called him, "Dear Jackey." The boy was at school at Bolton, in Lancashire, in 1774, and his father enclosed with the following letter a long and minute account of "The Natural History and Uses of Lead" in its various forms :

"MY DEAR BOY : Having a parcel to send to your good master, I take the opportunity of enclosing a few lines to you, well knowing that you will be glad to hear that your mamma, your brothers and sisters, are well, and continue their good will and affections to you. Your brothers often talk of you, and seldom omit drinking your health at dinner. Joss wants much to go to school with his brother Jackey, that he may learn to read, and learn so many

things out of books which he is very earnest to know, but finds there is no other way of gaining the knowledge he wants but by becoming a scholar and reading and studying for himself ; for, if he prevails upon his cousin Jackey, or any body else who is at leisure, to read a little for him, they are no sooner got into the midst of an entertaining story, or something he wishes to learn, but they are called away to other business, and leave him unsatisfied and distressed: ' Oh ! I wish I could take up the book and read the story out myself, papa ! ' But finding he is not able to do this at present, and being convinced that a little application will enable him to read for himself, he is determined to be more attentive to his learning, to say double lessons, and, if it were possible, to overtake even his brother Jackey in scholarship. I do not know how this may end, but am persuaded he will find it no easy matter to overtake one who is so active and steady at learning as I am told you are.

“ I suppose you have received two samples of red ore, with some flower-pots, etc. I sent you the ores, and now send you some account of them, because I find you are attentive to what I told you of them, and of some other natural bodies, and because I wish you to know a great deal of some things, and not be quite ignorant of any thing you may meet with in your journey through life. You must therefore begin to

learn early ; but more of this in some future letter.

“ Believe me, my dear boy,

“ Your truly affectionate father,

“ JOSS WEDGWOOD.”

We may mention the number of the Wedgwood family. Susannah, the eldest, was born 3d January, 1765. John, 28th March, 1766. Richard, 11th July, 1767, but died in June, 1768. Josiah, 3d August, 1769. Thomas, 14th May, 1771. Catherine, 30th November, 1774. Sarah, 25th September, 1776. Mary Anne, 18th August, 1778, but died in the following April.

No one loved children more than Wedgwood. As his wife was a model mother, so was he a model father. Though often engrossed by business, he was always true and faithful to his children, who were all alike in his eyes and heart ; all receiving their share of his affection. He was firm, yet tender. He gave them his love, and they repaid him with their obedience. As the boys grew up into men and the girls into women he was proud of their handsome presence and their intellectual attainments.

Wedgwood was most careful as to their training and education. There were governesses for the daughters, and tutors for the sons. One of the tutors who resided for some time in Wedgwood's family was John Leslie, afterward

professor of natural philosophy in the University of Edinburgh, one of the most distinguished scientific men of his age. Wedgwood, with his usual liberality, conferred an annuity of £150 on John Leslie for the careful instruction he had given to his sons. It is not improbable that Leslie's investigations into light and heat had some influence in determining Thomas Wedgwood's studies, and leading him to become the inventor of the heliotype,—in other words, of photographic science,—before Daguerre turned his attention to the subject.

CHAPTER XVII

WEDGWOOD AND FLAXMAN

WEDGWOOD was fortunate as well as wise in associating with himself in the production of his wares perhaps the greatest sculptor whom England has as yet produced. Born on the 6th July, 1755, John Flaxman entered life with no special advantages. His father sold plaster-of-Paris casts in New Street, Covent Garden, and afterward at a little shop in the Strand.

The boy was very weakly, and slightly deformed from his birth. As he grew in years he used to sit in a little stuffed chair behind his father's counter, over which he could just see; and there he read and made drawings in black and white from the casts before him. When customers came, he got down from his seat, and, with the help of crutches, went to the shelves, and selected the required articles.

Flaxman's mother died when he was seven years old. His father married again, but his step-mother was very kind to him—as much so, indeed, as his own mother had been. The customers who came to the shop took an interest in the invalid boy. One of the most benevo-

lent was the Rev. Mr. Matthew, a man of fine taste, who took an interest in art and artists. "I went," said Mr. Matthew, "to the shop of old Flaxman to have a figure repaired, and, while I was standing, I heard a child cough behind the counter. I looked over, and there I saw a little boy seated on a small chair, with a larger chair before him, on which lay a book he was reading. His pure eyes and beautiful forehead interested me, and I said: 'What book is that?' He raised himself on his crutches, bowed, and said: 'Sir, it is a Latin book, and I am trying to read it.' 'Ay, indeed?' I answered. 'You are a fine boy, but this is not the proper book; I will bring you a right one to-morrow.' I did as I promised, and the acquaintance thus casually begun ripened into one of the best friendships of my life."

The book the boy had before him was a Cornelius Nepos which his father had picked up for a few pence at a bookstall. Next day Mr. Matthew called with translations of Homer and "Don Quixote," which the boy proceeded to read with avidity. He even went about Hyde Park, with the help of his crutches, trying to find some distressed damsel whom he might proceed to deliver from bondage by the help of his little French sword which he had girded about him; but in vain. There was no *Dulcinea del Toboso*, or forlorn damsel, to be found even in Hyde Park or Kensington Gardens.

He was more fortunate with Homer. His mind became filled with the heroism which breathed through its pages, and the ambition took possession of him that he, too, would design and embody in poetic forms the majestic Ajaxes and Achilleses. He began to draw and model in plaster of Paris, wax, and clay. Of course his first designs were very crude, though some of them are still preserved. After he had become famous a friend asked him how he had accomplished these early works. "Sir," said he, "we are never too young to learn what is useful, or too old to grow wise and good."

When he arrived at his tenth year, his health improved. His limbs gained strength, he began to move about more freely and was able to throw away his crutches. He continued to model figures as before, and rapidly improved. Mr. Matthew not only patronized him and gave him commissions, but also invited him to his house, where he made the acquaintance of some artists, among others of Romney, Stothard, and Blake, the poet painter. Mrs. Matthew and Mrs. Barbauld were among his advisers and counsellors. They encouraged him to read Greek and foreign languages. He repaired to Mrs. Matthew's house in the evenings to hear her read Homer and Virgil, and discourse upon Latin verse and sculpture. While she read Homer, Flaxman by her side endeavored to embody in drawings such passages as

caught his fancy. This was, as he afterward said, one of the happiest periods of his life.

He obtained from Mr. Crutchely what was to him an important commission for a set of drawings illustrative of Homer. These were executed to Crutchely's satisfaction, and Flaxman's commissions soon increased. Friends now foretold his future eminence as a designer and sculptor. At eleven years old, and again at thirteen, he won prizes from the Society of Arts for his models of figures in clay. At fifteen he exhibited models at the Royal Academy, then in the second year of its existence. In the same year, 1770, he entered as an Academy student and won the silver medal. Next year he tried for the gold one, the reward of the highest merit.

All his fellow-students made sure that the assiduous and enthusiastic Flaxman would win the prize. Perhaps he himself was too cocksure of the result. But Sir Joshua Reynolds, the president, adjudged the gold medal to another student, called Engleheart, who was never afterward heard of. Flaxman, however, was not discouraged: he knew he deserved the prize, and the defeat, such as it was, merely roused his courage. "Give me time," he said to his father, "and I will yet produce works which the Academy will be proud to acknowledge."

Flaxman thought his defeat was due to the

slight of Sir Joshua. But perhaps he was too vain of his powers. This would appear from a letter of Wedgwood's to Bentley (14th January, 1775) : "I am glad you have met with a modeller, and that Flaxman is so valuable an artist. It is but a few years since he was a most supreme coxcomb, but a little more experience may have cured him of this foible." This allusion to Flaxman no doubt refers to his defeat by Engleheart at the Academy. Although Wedgwood thus referred to the sculptor, he very soon became one of his most attached and generous patrons. Bentley was the first who discovered Flaxman, most probably through the introduction of the latter to him by Mrs. Matthew and Mrs. Barbauld, as they all belonged to the same religious community.

Wedgwood proceeded to order some works from Flaxman. The first was a model for a chimney-piece, two models for vases, four bas-reliefs of the Seasons, and several models of the ancient gods and goddesses—Jupiter, Juno, Minerva, Apollo, and others. His charges were not great : £3 3s. for the pair of vases, one with a satyr and the other with a triton handle ; £2 2s. for the four bas-reliefs of the Seasons ; £1 15s. for an antique vase sculptured with figures ; and 10s. for each of the ancient gods and goddesses ; £2 2s. was paid for two statues, and 8s. 6d. for two cups and saucers.

These works were done in March and April, 1775, and the whole were paid for,—amounting to £12 18s.,—in January, 1776.

Some may think it a descent for a draughtsman and sculptor like Flaxman to have designed for Wedgwood such common things as cups and saucers. But it was not really so. An artist may be a true educator in taste while designing a common teapot or water-jug. Articles in daily use among the people, which are before their eyes at every meal, may become the vehicles of art education to all, and minister to their highest culture. Before Wedgwood's time the designs which figured upon our stoneware and china were often hideous. He determined to improve both designs and ornamentation; and Flaxman willingly and cheerfully endeavored to carry the manufacturer's views into effect. The subjects of his art were principally small groups in low relief from ancient verse and history. Some of them were equal in beauty and simplicity to his finished designs for marble.

Young Flaxman continued to ply his art diligently, both as a draughtsman from his father's stock-in-trade, as a student in the schools, and as an exhibitor at the Royal Academy. One of the friends of the Matthew family,—a Mr. Knight of Portland Place,—gave him a commission to make a statue of Alexander the Great in marble. Flaxman designed the figure

in clay, and Smith executed the work in marble. The statue was exhibited, and met with considerable praise.

But Flaxman could not make a regular livelihood by accepting such commissions. He had to rely principally upon the income which he derived from Wedgwood. For many years we find him modelling classic friezes, plaques, vases, ornamental vessels, and medallion portraits of distinguished men in various combinations of jasper and basalt. In July, 1775, we find Wedgwood requesting Flaxman to model the portraits of Sir Joseph Banks and Dr. Solander. Hoskins, Grant, Hackwood, and Mrs. Landre were modelling at the same time. Though Hackwood's portraits were excellent, Flaxman's were considered superior, because of their artistic value. This was especially the case in the Greek heads and the classical designs after the antique. Some of these were so exquisite that Wedgwood had a great difficulty in parting with them.

"Some Anthonies and Cleopatras are very fine," he wrote to Bentley (5th November, 1775), "and a few bas-reliefs, all of which I wish you to look at before they go into the rooms [for sale]. The blue grounds are out of the last kiln, and the Cleopatras, both of which are the finest things imaginable. It really hurts me to think of parting with these gems, the fruit of twenty years' toil, for the trifle we

shall receive, to make the business worthy of our notice.”

The new body called *jasper*, because of its likeness to the stone of that name, was first used in November, 1775. It was composed of a mixture of flint, potters' clay, carbonate of barytes, zaffre, sulphate of barytes, and *Terra ponderosa*. Wedgwood kept this combination very secret. To Bentley he wrote: “I have tried my new mixing of jasper, and find it very good. Indeed, I have not much fear of it; but it is a satisfaction to be certain, and I am now *absolute* in this precious article, and can make it with as much facility and certainty as black ware. Sell what quantity you please. I would as readily engage to furnish you with this as any pottery I make. We have only now to push it forward with the world and keep our secret.” Of his large and very fine Medusa he wrote to Bentley: “It is too fine to sell.” He had always the greatest difficulty in parting with his beautiful bas-reliefs.

In this jasper-ware Flaxman executed some of his finest and most classical works, and helped forward the enterprise of his munificent patron. Flaxman continued to exhibit at the Royal Academy,—several models in clay from the ancient Greeks and Romans, some portraits in wax, and a sketch for a monument to Chatterton,—and to make drawings and designs from the poets, from the Bible, and from the

“Pilgrim’s Progress.” He led a quiet, simple life, though he was always full of pleasant occupation.

Flaxman, feeling himself sufficiently enriched by the remuneration he received from Wedgwood, removed from his paternal roof toward the end of 1781, leaving there his father, the seller of plaster-of-Paris casts, and his brother William, a frame-maker and wood-carver.

Flaxman hired a small house and studio at 27 Wardour Street, and there he brought home his young wife, Ann Denham by name, whom he had long loved. He was then twenty-five years of age. Some thought it foolish of him to marry without any secured means, but it proved to be the greatest joy and blessing of his life. Ann Denham worshipped her young, cheerful, and accomplished husband. This was a good beginning. She had a taste for art and literature, understood French and Italian, and had acquired some knowledge of Greek. She was, nevertheless, a good domestic manager. She arranged her husband’s drawings, and encouraged and cheered him in his occasional moments of despondency.

Some time after their marriage Sir Joshua Reynolds happened to meet Flaxman in the street. “Ha!” said the president, “I have heard you have married.” “It is true,” replied Flaxman. “Then,” said Sir Joshua, “I tell

you you are ruined for an artist. You cannot now go to Rome and study the works of the great sculptors of antiquity." "I am sorry for that," said Flaxman, who returned home somewhat dispirited. He sat down beside his wife, took her hand, and said, with a smile: "Ann, you have ruined me for an artist." "How is that?" she asked. "It happened," replied Flaxman, "in the church, and Ann Denham has done it. I met Sir Joshua Reynolds just now, and he said my marriage had ruined me in my profession."

It is possible that Sir Joshua bore a grudge against Flaxman, for what reason is not known. He had adjudged the gold medal for sculpture to Engleheart, when every other artist thought that it should have been awarded to Flaxman. Sir Joshua was the first portrait-painter of his day, but he knew comparatively little about sculpture. Hence his spiteful remark to Flaxman that he had ruined himself as an artist by marrying Ann Denham. His wife, as usual, consoled him. "You will e'en go to Rome," she said, "and I will accompany you." "But how?" asked Flaxman. "We must work and economize," was her answer.

Flaxman accordingly set to work with increased vigor. He was willing to do any thing, so as to earn the necessary money for the purpose of enabling him to make the journey to Rome. He even undertook to collect the watch rate for the parish of St. Anne, and was occa-

sionally seen going about with an ink-bottle in his button-hole collecting the rates. He worked harder than ever for Wedgwood. Cameos, intaglios, busts, portraits, plaques of all kinds, proceeded from his fertile brain and hand. Among the other works he produced were the Apotheosis of Homer, the Muses with Apollo, the Dancing Hours, Priam begging the body of Hector from Achilles, Julius Cæsar, fawns, bacchantes, the Nine Muses, and other works. Wedgwood was as proud of the Muses as Flaxman himself. He styled Flaxman "the Genius of Sculpture." Several beautiful tablets for chimney-pieces were also produced by him. In fact, never did Flaxman work harder than at this period of his life.

He worked for others besides Wedgwood. He began to make monuments to the departed. His first was in memory of a man of genius similar to his own—that of Collins, the poet, for Chichester Cathedral. Another, of a still higher order, was that of Mrs. Morley for Gloucester Cathedral. The lady perished with her child at sea, and she is represented called up by angels, with her babe, from the waves, and ascending into heaven. "The effect," says Allan Cunningham, "is inexpressibly touching; it elevates the mind, and not without tears." Another of his monuments was in memory of Miss Cromwell, in illustration of the passage "Come, ye blessed."

Of a very different character was the group of Venus and Cupid, which he executed for his early patron, Mr. Knight of Portland Place. Flaxman preferred it to his monumental figures. Besides these works of sculpture were his numerous drawings, mostly after the antique, a large collection of which is still carefully preserved at the University College, Gower Street.

It is believed that Flaxman, before his marriage, visited Wedgwood at Etruria. The room is still shown in which he did his work. In one of Wedgwood's letters to Bentley, dated from Etruria (1st July, 1778), Wedgwood says: "Mr. Flaxman called to tell me that he was modelling a bas-relief of Lord Chatham in order to sell copies in wax. I told him that we should be glad of a cast, and he knew what we should make of it. I do not know what he means to charge other people, but you know we are to pay a price below casts and models."

During the year 1779, on Flaxman's return to London, he was engaged upon some of his most beautiful models, such as his Boys and Goat, his Triumph of Ariadne, his Homer and Hesiod, his Offering to Flora, and his Bacchanalian Sacrifices for a chimney-piece tablet. He also modelled his own likeness in wax, and a copy was sent down to Etruria for the purpose of being transferred into the jasper body. Flaxman took the greatest pains in beautifying

the commonest objects of utility. His ink-stands, chimney-pieces, candlesticks, seals, tureens, vases, lamps, cups, and teapots were most artistic.

It is not improbable that Flaxman was consulted by Wedgwood during his temporary stay at Etruria about the decoration of his house. On his return to London he wrote the following letter to Wedgwood :

“NO. 27 WARDOUR STREET,

“12th November, 1781.

“SIR: AS soon as Mr. Byerley [Wedgwood's agent in London] communicated to me your workmen's want of the drawings at large for the cornices, etc., in the saloon and vestibule I began them immediately to prevent delay ; but as some of the mouldings will be enriched in a manner not very likely to be well executed by a country plasterer from a drawing only, I will, if you please, send two or three patterns cut in plaster for ostrich eggs and dock-water leaf, etc.*

“You will probably have an ornamental frieze for the saloon. If that is not already

* The hall at Etruria has been converted into the offices of the Shelton Bar Iron Works. Besides the cornices designed by Flaxman, the ceilings were ornamented by drawings in oil by Angelica Kauffmann. These were removed by the agents of the Duchy of Lancaster, to whom the place belongs, to one of their offices in the north, probably in Yorkshire.

determined on, I would recommend the lions and foliage you admired so much in the chimney-piece I am carving for Mr. Knight, and particularly because you will have a new production without the expense of a new model. In the meantime I shall proceed diligently with your drawings until I have further instructions, the expedition of which will add to the favors conferred on,

“Sir, with great respect and gratitude,

“Your much obliged servant,

“JOHN FLAXMAN, JR.

“My wife joins with me in hopes for the health and happiness of Mrs. Wedgwood and your family.”

Wedgwood had been so much indebted to Sir William Hamilton, ambassador to the court of Naples, for his casts from the antique, discovered during his researches at Herculaneum, and for his fine collection of Etruscan vases, that, when Flaxman had finished his Apotheosis of Homer, he offered to send Sir William one of the finest copies of the tablet. On receiving it he replied as follows (Naples, 22d June, 1779): “I have had the pleasure of receiving safe your delightful bas-relief of the Apotheosis of Homer, or some other poet. Indeed, it is far superior to my most sanguine expectation. I was sure that your industry would produce in time something excellent in

the way of bas-reliefs from the specimens I saw before I left England, but I really am surprised and delighted in the highest degree with this proof of the hasty strides you have made toward perfection in your art. I only wish you may continue to meet the encouragement which you so richly deserve. . . Your bas-relief astonishes all the artists here. It is more pure, and in a truer antique taste, than any of their performances, though they have so many fine models before them."

For twelve years of his life, from his twentieth to his thirty-second year (1775-87), Flaxman principally subsisted through his employment for the firm of Wedgwood & Company. He did some of their most exquisite works, for which they paid him liberally. His portraits included those of Benjamin Franklin and Dr. Johnson. The latter is said to be one of the finest ever perfected by Wedgwood. In 1781 he finished two busts of Rousseau and Sterne, and modelled a bust of Dr. Fothergill. In the following year (1782) he modelled a very fine bust of Mrs. Siddons, and finished the cast of a fragment of Phidias. In that year he had the two sons of Wedgwood as pupils; but Flaxman, because of the munificence of Wedgwood, did not desire to receive any remuneration for the lessons he gave them. A correspondence took place on the subject. Flaxman's first letter was as follows :

“27 WARDOUR STREET, 8th July, 1782.

“SIR: As you desire a list of the orders you have given me, which are not yet completed, I have taken the liberty to trouble you, as I should be deficient in gratitude to your liberality and friendship if I permitted you to receive them by any other means, especially as my absence while you were in London requires an apology. This I could not avoid, because the time was appointed that I should settle some particular chimney-pieces for a friend who is going to rebuild his seat in Berkshire, and I thought to return before your departure. Mr. Byerley required me to set a value on my instructions to the young gentlemen, which I cannot comply with, because I fear in so short a time they could not profit much, and because I shall be well satisfied with whatever you think sufficient for those lessons, which were thirty-three in number. Mr. Byerley also observed that it would be agreeable to you for me to employ my leisure on your work. This he need not have mentioned, for I surely cannot do better than employ my small abilities in the service of so worthy a friend.

“I would have sent the drawing for the frieze of your saloon, but I do not remember that you determined on any design; so that, when I have received your instructions, I will either send sketches for your approbation or a drawing from any idea you may communicate.

“With this letter I have sent the size of Sir J. Banks’s tablet. Before I conclude I must beg, as soon as you have set a price on the ostrich’s-egg teapot in the fine white bisqué, that you will let me have one, which my wife intends presenting to a lady at Cambridge. Mrs. Flaxman desires your acceptance of her best wishes, and with mine, for the happiness of yourself, Mrs. Wedgwood, and the young lady and gentleman,

“I remain your much obliged servant,

“JOHN FLAXMAN, JR.

“P. S.—The orders are : Six wax medals of eminent Hollanders, which I am now working on, and intend soon to finish. Psyche on a Flower-Pot—a companion to Venus Adolescens. Several bas-reliefs of boys for teapot sides, and the wax profiles of several distinguished persons—these last to be done as opportunity shall permit.”

It is not known what remuneration Wedgwood sent to Flaxman, but the latter seems to have been greatly pleased with it in his letter of the 22d August, 1782. This letter is very valuable as authenticating as Flaxman’s work the magnificent bust of Mercury, afterward produced by Wedgwood :

“27 WARDOUR STREET.

“SIR : I would have thanked you for the princely present you gave me for the few in-

structions your sons had from me before now if thanks had been adequate to such generosity, but their only rewards are the elevated reflections arising from such actions themselves. I did not, therefore, write until I had prepared a small token of gratitude—two small reliefs of Jupiter and Mercury, which you may copy in your excellent bisqué for your manufactory if you think them worthy. You did me the honor to praise my bust of Mercury, the cast of which you will favor with a place in your study as one of the highest gratifications you can bestow on its sculptor.

“As I know your kindness interests itself in my welfare, I have the pleasure to inform you that I am nobly employed in modelling four Cristos, large as life, and a group of four figures from this passage in the prologue to ‘Henry the Fifth’: ‘Then should the warlike Harry, like himself, assume the port of Mars, whilst Famine, Sword, and Fire, leashed in like hounds, crouch for employment at his heels.’

“My wife and self desire our best compliments to Mrs. Wedgwood, Miss, and the young gentlemen, and I have the honor to remain,

“Sir, your most obliged and humble servant,

“J. FLAXMAN.

“P. S.—I am much obliged to you for the order given that the egg teapot should be delivered to me, but the gentleman who officiates for Mr. Byerley says it will not hold water;

so that I shall be glad if you will let me have one as soon as more are made, as Mrs. Flaxman has deferred writing to her friend for some months with intention to send a teapot at the same time."

Flaxman was perhaps happiest in his beautiful designs of children—romping, skipping, playing blind-man's-buff, and other groups of them. Flaxman, addressing Wedgwood from Wardour Street, October 28, 1782, writes :

"According to the desire you expressed in the last letter you favored me with, I have designed some groups of children proper for bas-reliefs to decorate the sides of teapots. Nos. 1 and 2 are intended to go entirely round a teapot of a flat shape, except where the handle and spout interrupt them. I have, therefore, made separate stories for each side. The first is Blind-Man's-Buff; the second is the Game of Marbles. Nos. 3 and 4 are the Triumph of Cupid, to be disposed in a similar manner on the sides of round and upright teapots. When you return the sketches to be modelled from, be pleased to give instructions concerning the size and other necessary particulars. Mrs. Flaxman presents her respects to Mrs. and Miss Wedgwood and yourself, and I have the honor to remain,

"Sir, your obliged servant,

"JOHN FLAXMAN."

In 1783-84 Flaxman was engaged in various works for Wedgwood, principally in chimney-pieces and portraits. The marble chimney-pieces were charged from £8 11s. 6d. to £11 4s.; but the masonry, polishing, and carving were charged nearly double. Among the portraits were those of Herschel, Dr. Buchan, Captain Cook, and C. Jenkinson. In 1784 he modelled a bas-relief of boys in wax, for which he charged £11 0s. 6d. Flaxman was also busy with the models of the celebrated chessmen. The following letter relates to the decoration of Wedgwood's drawing-room at Etruria :

“WARDOUR STREET, 5th February, 1784.

“SIR: I was last night honored by Mr. Byerley with your enquiry concerning the pictures you employed me to paint for the drawing-room ceiling.* The four divinities' heads for the corners have been nearly finished, and the allegory for the centre has had the effect roughly laid in some months since, and would have been entirely completed long before this but that I waited for your opinion on them, as you were expected in town almost daily for some time past. However, I have now sent two of the corners and centre, accompanied with the diffi-

* It would appear from this letter that Flaxman painted some of the figures on Wedgwood's drawing-room, besides Angelica Kauffmann, as explained in a previous note.

culties I am under, for your contemplation and decision. I think, when you have fastened them with pins in their places and considered the effect, you will find either the heads are too large for the centre, or that the figures in the centre are disproportionately small for the heads. If you think the heads have a proper effect, and are not too large when seen in their proper places, I must reduce the number of figures in the centre and place them upright in the long way of the oval, retaining the allegory, or make them genii children telling the same story ; by which means also the whole will have a better proportion. If you think the figures in the centre of a proper height and the heads too large and heavy, I will alter the corner to whole figures of children (genii) sitting with the same attitude the heads have now ; and in this case I shall reduce the number of figures in the centre to show the outlines more distinctly, like paintings on the Etruscan vases, as this manner has the best effect. When you have determined these matters and sent back the paintings, they shall be finished with all possible despatch.

“ I wish you may soon come to town to see Sir William Hamilton’s vase (Barberini or Portland vase). It is the finest production of art that has been brought to England, and seems to be the very apex of perfection to which you are endeavoring to bring your bisqué and jasper. It is of the kind called ‘ Murrinan ’ by Pliny,

made of dark blue glass with white enamel figures. The vase is about a foot high and the figures between five and six inches, engraved in the same manner as a cameo, and of the grandest and most perfect Greek sculpture.

“Since I repaired the bust of Mrs. Siddons after moulding, a friend of mine, J. B. Burgess, Esq., of Bedford Square, has been very desirous to purchase it, to set it with the model of Mercury and several other models he has of mine. As you have the mould of the model I think it cannot be of much use. To let Mr. Burgess have it will oblige him and be of some little advantage to me. You may depend on this: no other use will be made of it than being placed in his study, and if I have your permission to sell it to him, I shall take off half my charge for it in your bill.

“I return you many thanks for the liberal praise you bestowed on my chess-figures, and with best and most respectful wishes to Mrs. Wedgwood and your family from Mrs. Flaxman and myself, I have the honor to be,

“Sir, your most obliged servant,

“J. FLAXMAN.”

Mr. Wedgwood answered the above letter as follows:

“ETRURIA, 20th February, 1784.

“DEAR SIR: I duly received your favor of the 5th inst., with the observations you were so

kind as to make upon the paintings for my drawing-room ceiling, stating some difficulties you were under and desiring my decision upon them.

“The two heads of divinities and a sketch of the allegory for the centre came to my hands last night. I have hastily looked them over, but am obliged to put them by for the present, having neither time to consider them nor the hints you give me in your letter with the attention they deserve. When I can take them up again, I will write you further. Mr. Byerley will tell you something of my situation.

“I can only add that you have my free consent, as it will so much oblige your friend Mr. Burgess, to let him have the bust of Mrs. Siddons; the mould will serve my purposes. I am much obliged to you for the information you give me respecting Sir William Hamilton’s fine vase, and promise myself an exquisite treat when I do come to town, but the time is at present unavoidably uncertain.

“We are getting forward with the chessmen, and hope soon to send a complete set to Greek Street. Mrs. Wedgwood and my young folks unite in most respectful compliments to Mrs. Flaxman and yourself, with, dear sir,

“Your faithful and obedient servant,

“JOS. WEDGWOOD.”

Our next document is an account from William Flaxman (John’s brother), the frame-

maker and wood-carver, for frames supplied, amounting to £35 6s. 6d. the principal item being £27 for frames supplied to Master Thomas Wedgwood for Mr. De Louthenberg's pictures. Flaxman informed Wedgwood in the following year of the new works he is preparing for Etruria.

“WARDOUR STREET, 20th October, 1785.

“SIR: Mr. Byerley favored me with your orders concerning the three tablets, *i. e.*, two of Hercules and his Companions in the Hesperian Gardens, and Coriolanus's Mother Persuading Him to Return to Rome. The figures in the print are $4\frac{5}{8}$ inches high, and I have modelled my figures $5\frac{3}{8}$ inches, which allows one-seventh for shrinking in the bisqué. I should be greatly obliged to you for information if you would like to have the other tablets modelled in the same proportion. With respects to Mrs. Wedgwood and family,

“I have the honor to be, etc.,

“J. FLAXMAN, JR.”

Besides these works, Flaxman designed a bas-relief of the Birth of Achilles, and a matchless bronze vase, called by Wedgwood a “bronze encaustic,” in imitation of real bronze, both of which were greatly admired. The next letter relates to his other works. Flaxman also furnished (12th December) a bas-relief in wax of Venturia and Volumnia Entreating Coriolanus.

“WARDOUR STREET, 13th December, 1785.

“SIR: I am concerned that I could not send this bas-relief sooner, upon which I have been chiefly obliged to work at night; and now and then I have taken a day for some large monuments I have in hand which are in great haste. I hope, however, on comparing this model with that of Homer and Hesiod you will find it very superior. I shall take great pleasure in modelling Hercules in the Hesperian Gardens; and I think I can make it equal to Sir William Hamilton’s vase. If you are willing, I should do my utmost, but then I cannot set an exact price on it until it is finished. I should also be particularly obliged to you for instructions respecting the thickness. If it might be done as thin as the work on the before-mentioned vase, it would be more perfect, and the blue ground might show through the thin parts of the drapery, which several artists and other persons of taste have remarked to me is a great advantage where it can be done; but if it must be thicker, you will be so kind as to let me have a pattern. Your answer, when leisure will permit, will add to the obligations already conferred on,

“Sir, your much obliged and humble servant,

“J. FLAXMAN, JR.”

Wedgwood’s next letter to Flaxman related to the designs for the famous plaques which the

sculptor was preparing to represent Peace between England and France.

“ ETRURIA, 2d November, 1786.

“ DEAR SIR: I should have returned you the enclosed drawing with a few lines upon it before now, but have been to visit a sick friend at Buxton, which, with other necessary matters, have taken up almost the whole of my time since my return home.

“ Nothing in my opinion can more properly or more forcibly express the ideas we wish to bring forward than the group of figures you gave me, and which I now enclose; but as it will be necessary to have them divided into two parts in order to have a *pair* of medallions, that circumstance will call for a little alteration in the disposal of the figures. The three middle figures will make one medallion, which I will call No. 1. The Burning of the Implements of War and the figure of Peace must then form another group for medallion No. 2.

“ Montfaucon, in his ‘Antiquities’ (vol. i. part ii. p. 349), speaking of the manner in which Virtue is represented, says: ‘In Gordiano virtus Augusti exprimitur per Herculem exuvias leonis gestantem et clavæ innexum.’ I have got Mr. Webber to sketch me this Hercules to represent Virtue and the Implements of War sacrificing upon an altar sacred to Commerce; but this is not meant by any means to preclude any altera-

tion or better mode of expressing the same thing which will probably occur to you. I only mean to make a separate group for my own convenience, and leave it to you to make that group what you please.

“We must take care not to show that these representations were invented by an Englishman ; as they are meant to be conciliatory, they should be scrupulously impartial. The figures, for instance, which represent the two nations should be equally magnificent and important in their dress, attitude, character, and attributes ; and Mercury should not, perhaps, seem more inclined to one than to the other, but show a full front face between them ; and, if you think there is no impropriety in it, I should wish France to have her helmet and shield as well as Britannia, and the fleur-de-lis upon the latter.

“The figures must be modelled eight inches high, and you know upon this occasion expedition is of great consequence, so I will detain you no longer than while I beg your pardon for this exercise of your patience, and that you will believe me, with compliments to Mrs. Flaxman,

“Dear sir, yours, etc.,

“JOS. WEDGWOOD.

“I have some doubt of Hercules being a proper representation of Virtue. A female figure may, perhaps, be better, but this is left to your better judgment. J. W.”

In 1775 Flaxman had finished his drawings of the chessmen, had modelled the King of Sweden, a portrait of Governor Hastings, and designed Mr. and Mrs. Meerman's portraits. During the next two years he was mainly occupied with the plaques, some of which embodied his finest works. There was Mercury Joining the Hands of England and France, and Peace Preventing Mars from Bursting the Door of Janus's Temple. He also finished the bas-relief of Hercules in the Gardens of the Hesperides, and he was now able to mention the cost of the work, which was twenty-three pounds. In the following letter Flaxman refers to two of these designs :

“WARDOUR STREET, 12th January, 1787.

“SIR: I have the honor to trouble you with my bas-relief of Mars and Peace, which I hope you will like. I have sent the model without any mould, because I apprehend, on second thoughts, your people will make a model better and fitter for your purpose than I can; and it will be some advantage for them to see the taste of finishing before it undergoes that operation; which will be attended with no more difficulty than the two last wax models I sent, the casts from which were made at your factory. I am going on with the other bas-relief and the chimney-piece. I return my grateful thanks for the kind enquiries after Mrs.

Flaxman, who desires her respectful compliments to Mrs. and Miss Wedgwood and yourself, together with,

“ Sir, your most obliged servant,

“ J. FLAXMAN.”

This is the last letter I possess from Flaxman to Wedgwood, before the former left London for Rome. I find that Wedgwood paid Flaxman, between July, 1773, to August, 1787, £196 15s. 8d. at different times. These sums included Flaxman's drawings and models, together with mason's charges, packing-cases, bookings, and such like. After Flaxman, with the help of his economical wife, had accumulated sufficient means to enable them to set out on their journey, they left London in the autumn of 1787. Flaxman could now look back upon the time when he showed his drawing of a human eye to Mortimer, who asked: “Is that an oyster?” to the refusal of Sir Joshua Reynolds to award him the gold medal because he preferred his inglorious opponent, Engleheart; and also to Sir Joshua's still more recent censure upon Flaxman that he was “ruined for an artist” because he had married Ann Denham. And now Flaxman was setting out for Rome, accompanied by his wife, to show, in the sculptor's own words, “that wedlock is for a man's good rather than for his harm.”

Wedgwood furnished Flaxman with letters of introduction to his friends at Rome. To Micali of Leghorn he wrote as to the bill of lading of Flaxman's chest: "It is the property of Mr. Flaxman, an artist of this country, and a much valued friend of mine, who is going to make some residence in Italy. . . . Whatever expenses may be incurred, you will please charge to my account, and favor me with a line of advice."

Flaxman and his wife went by Paris, and stayed a few days there. He was visited by the Duc de Bouillon, who gave him a few commissions for Wedgwood. The travellers went forward to Rome, and arrived there safely. Wedgwood's eldest son, accompanied by Weber, was in Rome at the time of his arrival, and visited him frequently. Flaxman continued to do work for Wedgwood. Many letters may have passed between them; but the first I possess is dated 24th December, 1788, about a year after his arrival in Rome. In that letter Flaxman says: "I am concerned you have not received the wax model of the Prince of Piedmont's portrait. . . . It was sent in Mr. J. Wedgwood's baggage, with the snuffbox from which it was copied. . . . I am finishing a bas-relief, restored from the antique, of the Birth of Bacchus for Mr. Wedgwood." Flaxman also sent a finished model of Mercury from Rome, and another of Shakspeare.

Canova had the greatest respect and admira-

tion for the works of Flaxman. He made an express visit from Venice to Rome for the purpose of seeing and making the acquaintance of the English sculptor. It was on this occasion, says the *Magazine of Art*, that he made his well-known apothegm as to the English method of judging; for when asked by one of the fashionable celebrities, who buzzed about him in swarms, to what circumstance they were indebted for the honor of his visit, he told him he had come to see their sculptor Flaxman. "Flaxman!" replied the magnate; "we think very little of him here." "You in England," said Canova, "judge through your ears, and not by your eyes."

While at Rome Flaxman had much intercourse with Mr. Deveare, one of Wedgwood's designers and agents. He was a man of much ability. In a letter to Byerley, London, written in the spring of 1788, Flaxman says: "When you write to Mr. Wedgwood, you will be so kind as to inform him that Mr. Deveare has been at work with the utmost diligence ever since he has been here on the bas-relief of the Borghese vase, in which he has succeeded very well, but it will still take him some weeks to finish, and after he has done I also shall have something to do with it. Mr. Wedgwood will easily concur, as this is new work to Mr. Deveare, that he must needs be slow at first, especially as he takes so much pains."

While in Rome, Deveare (afterward, when he came to Etruria, known as John de Vere) did his work in Flaxman's studio, and thus his modelling was open to the suggestions and improvements of the English sculptor, who was never wanting in his praise. Thus, in the following year, Flaxman informed Wedgwood that "Mr. Deveare has finished the bas-relief of Proserpine in the most beautiful manner." Wedgwood returned his thanks to Flaxman in the most cordial manner, especially for Deveare's model of the Discovery of Achilles. In the meantime Flaxman mostly worked at the statues and monuments, for which purpose he had come to Rome. He continued his drawings after the ancient classics, always showing his fine sense of the harmony of composition; he executed his illustrations of Homer, Æschylus, and Dante, saturating his fancy with the spirit of the days of old. After spending several years in Rome he returned to London, where he was duly recognized as the greatest sculptor of his time.

We have already given some account of the relation between Flaxman and Deveare in relation to the bas-reliefs. We now give another, and the last, letter from Flaxman to Wedgwood:

"ROME, 20th January, 1790.

"SIR: During my residence here I have troubled you with two or three short letters,

chiefly relating to Mr. Deveare, and as I shall leave this place in less than three months, it is necessary for me to add another, that every thing relating to him as far as concerns me may be settled before my departure. Mr. Deveare and myself felt particular uneasiness at the information contained in your two last letters, that the two last bas-reliefs he sent to you were so much broken and spoiled. We both earnestly hope the damage is not irreparable, but if it is, and was my concern, I should certainly desire your permission to make the loss good, and I am sure Mr. Deveare will be as desirous to do this as myself. When he packed the first bas-relief, I superintended him, and saw that it was packed in the same manner with those I have sent from London to Etruria. I saw the second packed in the same manner; but for the third and fourth I do not remember seeing them packed, or, if I did, my mind has since been engaged so much on other objects that it has escaped my memory, yet Mr. Deveare assures me they were packed exactly in the same manner as the first, except as to the width of the paper, and therefore I am at a loss to account for the misfortune. However, we have determined on a method for packing for the future which cannot fail to convey your work safely, unless the packing-box itself should be broken to pieces. In addition to the directions for packing given in your two last letters,

which shall be carefully attended to, the box itself shall be well wrapped in straw, and tightly sewed in coarse cloth. I likewise desired Mr. D. to propose in his letter to you that he should mould the work he does for you, and send the mould by another ship, or keep the mould until he receives advice from you of the safe arrival of the model, when it shall be immediately destroyed. This scheme was suggested by me merely for your security, and you will of course accept or reject it as shall seem most convenient.

“The bas-relief of the Discovery of Achilles which Mr. D. has just finished (of which he has enclosed a sketch in his letter, and which only waits your instructions to be sent to England) is, in my opinion, a sufficient evidence of his attention and improvement. We fixed on this subject for its beauty and expression, and, notwithstanding the original is much mutilated by time, Mr. D.’s copy is full of the sentiment of the fine antique, and some parts particularly are so well executed that it would be difficult to exceed them.

“As I shall quit Rome in so short a time, I must beg your attention to the following particulars. There is a clause in the agreement between you and Mr. Deveare which stipulates that his weekly salary shall be raised the second year of his engagement, and that it shall be again raised the third year, on condition that you shall be satisfied with his studies and pro-

ductions. I wish it were possible for you to see his last work immediately, which would enable you to decide with more certainty ; but as this cannot be, you must rely partly on the truth of my representation, and for the rest judge from what you have seen. It is very certain that the expense of Mr. D.'s journey was a considerable sum, entirely owing to you, and it is also certain that your expense in each of the works he has done has been very great ; but it is equally certain that no man can be more industrious or zealous to improve, that he had a new profession to study, and I believe, of the bas-reliefs he has sent to England, the last will always be found the best and least expensive in proportion to the labor. You will favor me with your determination on this subject, which I shall communicate to Mr. D.; and whatever it may be I am sure he will consider it as proceeding from that justice and generosity which he has already so amply experienced.

“Mr. Deveare desires me to inform you that he should be willing to continue his present employment for you in Rome after the expiration of his agreement upon the following conditions : that he will take up no money on his work until he delivers the bas-reliefs into the hands of Mr. Jenkins for its conveyance to England, that he will then receive half the payment of his time, that he will send the account of his time with the work to you, and he will then for the re-

maining moiety receive so much as you, upon inspection, shall think the labor deserves.

“I shall conclude my letter with a few words concerning myself. I hope the choice of subjects which I have given to Mr. Deveare are such as will do no discredit to your bisqué, and will please the discerning connoisseur. They are at least such as I should have chosen for myself. I had the double desire of doing that which would be agreeable to you, and at the same time of serving Mr. Deveare in such small matters as these. Only I have been his friend; it is you that have been his patron and his essential friend, and he is sensible of his obligations.

“I am concerned that I have not entirely finished the bas-relief of the Birth of Bacchus, which I began for you so long ago. It is nearly finished. I shall bring it to England with me, and about three weeks after my arrival will end it. The studies I have made, so absolutely necessary to my improvement, one considerable work which I have finished, and another I am engaged in, have engrossed my time and thoughts. You will, I am sure, be well convinced that I ought to lose no time or opportunity while I remain here for furnishing my mind with information for my future employment. My career here now draws toward a conclusion. I have refused some considerable business that I might not be detained longer than the time I had appointed from my

friends and country ; and with the permission of God we shall see each other in June next. Mrs. Flaxman unites with me in respectful remembrance and best wishes to yourself, Mrs. Wedgwood, and all your family. We also beg our loves to our good friends Mr. and Mrs. Byerley, and are impatient to see them, as well as our other friends. I have the honor to remain,

“Sir, your much obliged friend,

“JOHN FLAXMAN, JR.”

CHAPTER XVIII

WEDGWOOD AT WORK AGAIN—DEATH OF BENTLEY

HAVING already occupied so much space with the history of Flaxman and his work for the great potter, it is necessary that we should return to the personal history of Wedgwood himself.

For him there was no finality in the development of his profession. It was not enough that he had achieved success. He went forward with improvements on what he had already done, and his fame steadily grew. His works at Etruria became a point of attraction to numerous visitors from all parts of Europe.

“The importance of the manufacture which he brought to so prosperous a state,” says Marryat, in his “History of Pottery and Porcelain,” “is proved by the fact that, although many of the states of Europe had prohibited the admission of British earthenware, and others had loaded it with very high duties, five-sixths of the quantity which he made were exported; and his earthenware cameos were so esteemed by foreign-

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ers that they were eagerly purchased by them, and may be found in many cabinets abroad amid the most splendid specimens of Sèvres and Dresden porcelain. Wedgwood succeeded completely in giving to hard pottery the vivid colors and brilliant glaze which, until that period, had been seen only upon porcelain. His ware was sold at a price, too, which brought it within the means of general consumption, both at home and abroad."

It may also be added that the beautiful set of chessmen, designed by Flaxman, were the first in modern times executed in pottery. The author of the article "Flaxman," in the ninth edition of the "Encyclopædia Britannica," observes that the extreme refinements of figure, outline, and modelling which Wedgwood aimed at in his ware were not the qualities best suited to such a material; or it might be regretted that the gifts of one of the greatest figure designers who ever lived should have been employed in such a minor and half-mechanical art of household decoration; but the beauty of the product it would be idle to deny, or the value of the training which the sculptor by this practice acquired in the delicacies, the very utmost delicacies, of modelling in low relief, and on a minute scale.

But the sculptor, in his early days, must necessarily support himself and his noble wife by his earnings from those who had the courage and

munificence to employ him. Besides, his drawings after the ancient Greeks, and his practice in modelling figures for Wedgwood's plaques, and his designs of playful children with which he ornamented the teapots and other wares, were but the earnest of his future career as the greatest sculptor of his time. The remarkable series of drawings published through the enterprise of Mr. F. Rathbone, a worshipper of Wedgwood,* and executed by M. F. Appel of Paris, under the title of "Old Wedgwood, the Ceramic Relief Art of the Eighteenth Century," will serve to show what an influence the sculptor's early practice, as well as the munificent potter's enterprise, had upon advancing the art of the century he lived in. The drawings consist of vases, plaques, medallions, portraits, intaglios, and cameos produced by the famous potter during the years between 1760 and 1795. Not satisfied with his knowledge of English, Wedgwood was learning French. He also proceeded with his study of chemistry, botany, drawing, designing, and conchology. He endeavored to get to the bottom of every thing. His knowledge and apprehension involved the entire study of natural science. And the results were seen in the admirable works which he executed. "My tablets," he said in one of his letters, "only

* The drawings are published by Mr. Quaritch, Piccadilly.

want age and scarcity to be worth any price." This prophecy proved entirely true.

While occupied with his plaques, cameos, seals, and ornamental teapots, Wedgwood did not neglect his useful ware, which was the foundation of his prosperity. The queen patronized his beautiful pearl-white tea-ware, which soon became popular. Her Majesty also visited Wedgwood's collection of works in Greek Street on 19th June, 1779. "I thank her Majesty," wrote Wedgwood to Bentley, "for the honor she has done to the pearl-white, and I hope it will have due influence upon her loyal subjects. The dishes to complete the service have gone to-day." On the following day Wedgwood wrote to Bentley: "The box sent last night contained a head of the queen and another of the king."

But most important of all was the new composition for mortars which Wedgwood, with his complete knowledge of clay, contrived for the use of the apothecaries of Great Britain, and, indeed, of all the world. He had been accustomed to supply Dr. Priestley with crucibles and retorts before he left Leeds, and they were now in considerable demand by philosophers and chemists in this and foreign countries; but the introduction and general use of his mortars came later in his life. At first the surface of the mortar blistered; but by constant experiments he entirely obviated this great defect.

By the use of Cornish clay he was enabled to make the entire mortar and pestle perfect. Wedgwood's invention was taken up at the Apothecaries' Hall, and from the tests which they withstood there his mortars and pestles acquired a fame which has lasted to the present day.

These were happy years for Josiah Wedgwood; there were lights and shadows, as there must be in every life, but in the main he was prosperous in every respect; his chief joy was in his wife and children, whom he dearly loved. Bentley, in London, had been very unwell, and Wedgwood advised him to take a ramble. "Have you got a horse?" he asked, "for a good horse, with its consequences, are first-rate blessings. . . Sukey [his eldest daughter] is now very well, and pretty strong, which I attribute very much to her riding on horseback. We sally forth, half-a-dozen of us, by six or seven in the morning, and return with appetites scarcely to be satisfied. Then we are busy with our hay, and we have just made a new garden. Sometimes we make experiments, then read and draw a little, so that altogether we are very busy folks. . . Sukey is quite out of patience with her old spinet, until her new one arrives, with its double keys. . . My girl is quite tired out with her miserable hum-strum; it takes half her master's time to put it in tune."

Wedgwood told Bentley that he spent his

holidays with his boys at home. It must have been a happy family. He regretted that he could not go to London, having a bad cold, and could not accept Bentley's invitation to smoke a pipe with him at Turnham Green. Bentley had removed to that quarter of London, against Wedgwood's advice, because it was too low and too near the river. Wedgwood continued happily engaged with his boys at home. They were very busy with chemistry and chemical combinations. To Bentley he wrote (17th March, 1779): "We want nothing just now, my dear friend, but a little more time, and in that article we find ourselves greatly limited. We husband what little portion is allotted to us with tolerable economy. We rise before the sun, often before daylight, and pursue our experiments until supper calls us away, and even some time after, and yet all is too little for the studies before us. The boys drink in knowledge like water, with great avidity, and quite to my satisfaction. Jack is very deep in chemical affinities, and I have no fear of his making a tolerable progress in the science, for it is much pleasanter to him than grammar! Indeed, I have some fears of the latter being neglected for his new study."

Wedgwood gives in his letter some painted colors effected by Prussian lixivium, as being calculated to make the study pleasanter for

young people, and easier to be stored up in the memory. Besides, Dr. Darwin and Mr. Walton (the lecturer on chemistry) quite approved of the method.

In May, 1779, Wedgwood had two family pictures modelled by Stubbs, the animal painter, in the following manner: "Sukey playing on her harpsichord with Kitty singing to her, which she often does, and Sally and her younger sister on the carpet, in some employment suitable to their ages. This to be one picture. The pendant to be Jack standing at a table making fixable air with his glass apparatus, and his two brothers accompanying him. Tom jumping up and clapping his hands in joy and surprise at seeing the stream of bubbles rise up, just as Jack has put a little chalk to the acid. Joss with the chemical dictionary before him in a thoughtful mood, which actions will be descriptive of their respective characters."

Stubbs painted another picture, including Wedgwood and his family, but no portrait of Wedgwood surpassed that by Sir Joshua Reynolds, which is copied as the frontispiece to this book. Another portrait was painted by Wright of Derby, but that by Sir Joshua stands unrivalled.

Wedgwood had two of his sons at Bolton for education. He began to think that he was giving them education that would be of little use to them in after life, and thought it would

be better to give them some athletic exercises which would establish their health and improve their constitution. He consulted his devoted friend, Dr. Darwin, who approved of his views, and thought it a very idle waste of time for the boys, who were intended for trade, to learn Latin, as they did not learn it to any tolerable degree, or retain what they learned. Much better, he thought, that they should learn modern languages,—French and German,—as well as make them proficient in accounts. The boys were accordingly taken from the boarding-school at Bolton, and sent to a school in the immediate neighborhood of Etruria.

During these pleasant family meetings Wedgwood was sedulously pursuing his own profession. He was in constant communication with Sir William Hamilton, who supplied him with casts from bas-reliefs and other antique subjects. Sir William, in acknowledging his bas-relief of the Apotheosis of Homer, a veritable masterpiece, said it was far superior to his most sanguine expectations. “I am really surprised and delighted,” he said, “in the highest degree with this proof of the hasty strides you have made toward perfection in your art. . . Your bas-relief astonishes all the artists here; it is more pure, and in a truer antique taste, than any of their performances, though they have so many fine models before them.”

Wedgwood was also devoting himself to por-

traits of distinguished men, living and dead. One of his best was his cameo medallion of Sir William Hamilton. It was crisp, sharp, and an excellent likeness. His portraits of the De Witts, Boerhaave, and De Ruyter were greatly admired by the Dutch. Among the portraits which he executed were those of Dr. Priestley, his devoted friend ; of Dr. Darwin, his admirer and physician ; of Dr. Johnson (modelled by Flaxman) ; of Admiral Keppel, an immense favorite ; of Prince William Henry (afterward William IV.) ; of Dr. Franklin, the American philosopher ; and of John Philip Elers, one of Wedgwood's predecessors in the manufacture of Staffordshire earthenware.

“ We propose,” Wedgwood wrote to Bentley, “ to have more portraits prepared for sale abroad, such as Voltaire, Rousseau, Linnæus, the King of Prussia, and the Hereditary Prince. The Italian poets by Flaxman may, perhaps, by undressing them, and putting their hair in order, be made fashionable. Among others in preparation are Peter the Great, Lord Bacon, Mr. and Mrs. Wedgwood ; Mr. Stubbs, the modeller of the tablets ; Edward Bourne, my old bricklayer, a study.”

Wedgwood was also paying great attention to ornamental chimney-pieces, which were more eagerly bought up in Ireland than in England. He introduced his best compositions into those ornaments, which were truly works of art. His

bas-relief medallions, from four to six inches in height, were of the highest class of workmanship; they were simply beautiful. His life-size busts of distinguished men were admirable, and in great demand.

Wedgwood wrote to Bentley in August, 1778, and informed him what he was making for next year's exhibition. There are Dancing Hours for tablets or friezes; Etruscan vases with Apotheosis of Homer; Choice of Hercules, in different sizes; Triumph of Bacchus, of the largest size, with attending fawns; the Sacrifice to Flora, new and large; the Sacrifice to Bacchus, new and very large; and the Triumph of Ariadne, which was then in hand, together with other new works.

"We cannot," he added, "master Achilles. I have had him demolished more than once, but he still rises again, the same heavy, unmeaning figure, and I rather think we shall be obliged to drop him, but not without another trial when opportunity occurs. We are under the same difficulty in attaining the character of the genii of Virgil in his bust, which is now modelling. . . . It has been twice finished to moulding, but not satisfactorily. I this morning [1st August, 1778] resumed my old employment, took the modelling tools into my own hands, and made one side of the head, pretty near like the genii, and I will take another stroke at him this afternoon. I have opened his mouth, and

I shall send him to you singing some of his own divine poems." It may be added that the head of Virgil was satisfactorily finished, and was regarded as one of Wedgwood's finest works.

In the summer of 1779 Wedgwood made a friendly visit to Sir William Hamilton at his property at Blithfield, near Lichfield. "His new room," he wrote to Bentley, "is hung round with Correggios, Raphaels, Guerchinos, Bassanos, and the works of many superb masters. . . Among other great works of art Sir William particularly pointed out the chimney-piece to my attention, assuring me at the same time that he esteemed it the best piece in his room, and showed it as such to all his visitors. You know the pieces—Homer and Hesiod for the tablet, and the Muses for the frieze. The statuarist has done them justice, and they look charmingly, and do more than support themselves in the very fine company into which he has introduced them. . . In looking at the tablet I lamented a little chip off the edge, which misfortune, I suppose, had befallen it in the hands of the workman. 'We esteem it a happy accident,' said Sir William; 'it shows the merit, the fine texture, of the composition, which might otherwise have passed for a painted surface.' My visit was a most happy one."

Bentley, in a friendly way, complained of the length of Wedgwood's letters. They were so elaborate that he proposed to send him a con-

densing engine. Not less astonished was Mrs. Wedgwood with the enormous increase of his library. "My wife tells me I must buy no more books until I build another house. She also advises me to read some of those I already have before I buy more," an advice that would suit many other librarians besides the great potter.

Toward the end of 1779 Wedgwood went to Bolton to bring back one of his boys, whom he had sent to school again. He found the cotton districts in a state of turmoil. The workmen had struck and were going about breaking steam-engines and machinery. At a mill near Chowbent the mob was fired upon, and several were killed, but without much effect. A mob collected again, broke into a mill, and destroyed over ten thousand pounds' worth of property. There was war abroad and war at home. Wedgwood considered the war with America disgusting. He was in great fear about the invasion of England by the French. "The docks and magazines at Plymouth might be destroyed. We are defenceless," he said. "It is all the fault of the Ministry: they are our worst enemies."

Nevertheless he stuck to business. At the end of 1779 he undertook the manufacture of earthen water-pipes, "first for London, and then for all the world. We will finish the bargain," he wrote to Bentley, "over our next pipe.

Fifteen dozen brown ink-pots were packed for you yesterday." Wedgwood was now engaged in superior work. He was making gems and cameos for rings, bracelets, and tablets. They were greatly superior to every thing of the kind before made. Indeed, no one had heretofore attempted to compete with him. To Bentley he said : " They appear so distinct and so pleasant to look at, with their colored grounds. The whole assemblage of white, blue, gold, and black have a striking effect. . . They are really a most liberal and noble collection of objects, very rare and most difficult to come at. The white Muses seem to me even finer things than those with blue grounds."

A few days later Wedgwood said : " I am in a course of experiments for colored grounds for the white figures which shall take a polish and be like some fine natural stone. The blood-stone, if it can be accomplished, will be admirable for the purpose."

In the same year Wedgwood began to make china or porcelain, having by this time secured a sufficient supply of kaolin from Cornwall. This was another step in his great enterprise. His traveller (Byerley) writes to his employer : " I have sold all your Garricks and Shaksperes, framed in black, at York. I could sell thousands of Keppels at any price. Oh ! Keppel, Keppel ! Why will you not send me Keppels ? Next month ? "

Wedgwood's sons were now attending the lectures of Mr. Walton on chemistry. Dr. Priestley's last discovery was described as not only quite new, but exceedingly interesting. Walton described the doctor as "the Newton of the age." Wedgwood made haste to have the model of Priestley's portrait finished, so as to supply the general demand. No doubt these studies of the young Wedgwoods ended in the discovery of photography, principally by Thomas Wedgwood.

Wedgwood enters in his diary: "Much trouble, yet many blessings." One of the greatest of these troubles was the death of his dear friend Bentley, who had long been ailing, but no one thought of his illness as fatal. He was only forty-nine, comparatively a young, or at least a middle-aged, man. Wedgwood was constantly telling him, when he felt unwell, to take a ramble somewhere. On the 30th of June, 1780,—the year of his death,—Wedgwood wrote to him: "Come to Etruria. I will willingly go with you to Buxton, Matlock, or any other place. . . I have blamed myself for not going oftener to Buxton. The air of that calcareous country is always grateful to my animal frame. The ride does me a great deal of good, and I generally excite some attention after my pots and pipkins, and draw some of the company after me to Etruria."

Bentley, however, did not go to Buxton, but

to Margate, for the benefit of the sea air. While there Wedgwood requested him to collect some shells for him, as he had begun the study of conchology. Bentley sent him many select shells, which Wedgwood copied on the ware which he afterward made. Bentley afterward went to Etruria with his wife, and spent a few pleasant weeks there, but derived no permanent benefit, for on his return to London he became worse than usual. Wedgwood had no idea that his partner was so ill, and continued his correspondence to the end. But to his last letter there was no reply. Bentley died on the 26th November, 1780, at the age of forty-nine.

There were universal lamentations at his death. Mr. Griffiths wrote to Wedgwood :

“TURNHAM GREEN, 25th November.

“MY DEAR SIR: Our poor friend yet breathes, but, alas! it is such breathing as promises but a short continuance. Almost every hope seems to have forsaken us! I dread the thought of what will be the contents of my next! Adieu! “R. G.”

There is no record of the disease of which Bentley died. It may have been of apoplexy, as he often complained of his head. Wedgwood was on his way to Turnham Green when he heard of his friend's fatal illness. Bentley

was buried in a vault within Chiswick Church. Many friends gathered together at his funeral. They deplored the sudden death of one who was so bright, so gifted, and so intelligent. Wedgwood, who was almost overwhelmed by his loss, had a tablet erected over his remains by Scheemaker, the sculptor.

Sam Boardman, his partner at Liverpool, wrote :

“ 31ST DECEMBER, 1780.

“ It would be hard to submit to this fate of Providence were we not convinced that some wise end is answered by every event in life, and that our esteemed friend has, for the short time he was among us, spent a happy and useful life. He has left us a noble example of virtue and goodness, which I hope will not be forgotten in our actions, both in public and private life.”

“Athenian” Stuart composed a record of his life. The last words were these: “His extensive abilities, guided by the most expanded philanthropy, were employed in forming and executing plans for the public good. He thought with the freedom of a philosopher, he acted with the integrity of a virtuous citizen.”

Chiswick Church has been recently rebuilt, but the monument, with its inscription to Bentley, is still to be seen over the south door of the interior of the church.

Immediately after the death of Bentley the London stock, so far as related to the partnership of Wedgwood & Bentley, was sold at Christie's, the sale occupying twelve days. The "Sacrifice to Hymen," made in 1787 after the design of Flaxman, sold for £415. At the sale of Dr. Sitson's collection, eight years later, the large "Apotheosis of Homer," designed also by Flaxman, sold for the enormous sum of £735! It has now passed into the collection of Lord Tweedmouth. Wedgwood's statement proved true: that his ornamental works only wanted time and scarcity to make them worth any thing.

CHAPTER XIX

WEDGWOOD'S PYROMETER OR THERMOMETER

EVER since Wedgwood had begun the manufacture of earthenware his attention had been attracted to the heat of his kilns. He pulled down one after another in order to find the furnace that would bake his earthenware and melt his glazes. This cost him a great deal of money, but he conquered the difficulty by his usual perseverance.

He experimented constantly in the endeavor to find the necessary gradations of heat up to the very highest point ; and this led him to the invention of his pyrometer—that is, a machine for measuring temperature by the expansion of solid bodies by heat. He began from the commencement of redness up to the highest temperature that can be produced in the furnaces of the chemist. The celebrated Bergmann, in his “*Sciagraphia*,” reckoned the heat at which silver melts to be less than that which makes iron red hot. This, however, was afterwards found to be a mistake.

Muschenbrock, Desaguliers, Ellicot, and Smeaton, the engineer, made experiments with

the pyrometer, but they never reached so intense a degree of heat as that attained by Wedgwood. The advantages of an accurate measure of the heats of metals, furnaces, and other objects are obvious to every one concerned in operations by fire, and Wedgwood's invention for supplying this grand desideratum was as simple as it was ingenious.

All clays are contracted, or have their bulk diminished, by fire, more and more in proportion to the *intensity* of the heat; *e.g.*, little masses of the same clay are adjusted to enter the wider end of a graduated canal; so that, after passing through fire, they will go further into the canal, the point at which they stop showing their quantity of diminution. This point is numbered, and exhibits the heat which the clay has undergone. This instrument Wedgwood first called a Pyrometer, or heat-measurer; but that name having previously been appropriated to a machine of a different kind, for measuring the expansion of bodies, he thought it better to retain the name of "Thermometer," or the measurement of the expansion of mercury compared with the lower degrees of heat.*

Wedgwood sent his first paper to the Royal Society on the 9th of May, 1782. His paper

* Wedgwood explained his views to the Royal Society ("Philosophical Transactions," vol. lxxii., and afterward in vols. lxxiv. and lxxvi.)

was entitled "An Attempt to make a Thermometer for Measuring the Higher Degrees of Heat, from a Red Heat up to the Strongest that Vessels of Clay can Support." A few months after his paper had been read at the Royal Society Mr. William Playfair, an Edinburgh professor, wrote to Mr. Wedgwood the following letter :

"LONDON, 12th September, 1782.

"SIR: I had the pleasure of being present at the reading of your very ingenious paper on your newly invented thermometer before the Royal Society last spring, and of joining in the general satisfaction that such an acquisition to art gave all present. I have never conversed with any body on the subject who did not admire your thermometer, and considered it as being as perfect as the nature of things will admit of for great heat ; but I have joined with several in wishing that the scale of your thermometer were compared with that of Fahrenheit's (so universally used for small degrees of heat), that without learning a new signification, or affixing a new idea, to the term *degree of heat*, we might avail ourselves of your useful invention. The method proposed in the enclosed paper occurred to me as one applicable to this purpose, and I lay it before you with all deference to your better judgment of the subject. I should be glad to know where I

could purchase some of your thermometers, as I can get none here in town.

“I am, sir, with much regard,

“Your most humble servant,

“WILLIAM PLAYFAIR.”

Wedgwood followed Mr. Playfair's advice. In his next papers, sent to the Royal Society, he gave a reduction of the degrees of his thermometer to Fahrenheit's scale, from which it appeared that the greatest heat he could generate in a small furnace coincided with many thousands of degrees of Fahrenheit—the scale of heat which was registered by his thermometer being about thirty-four times as extensive as that to which the common thermometers could be applied.

In another paper (“*Phil. Trans.*,” lxxvi.) he described the manner of forming the clay pieces and of adjusting the quality of the clay itself, with the divisions of the measuring gauge or scale, so that the same circumstances might constantly give the same results. The clay he had employed at first was the small remainder of a parcel from Cornwall, which was soon exhausted. Fresh parcels, even from the same pit, differed considerably in the degree of their diminution by fire. He therefore found it necessary to add to the best clays he could procure a large proportion of alum earth, in the gelatinous state in which it was precipitated by alkalies from the solution of alum, and well

washed by boiling water. By these and other experiments Wedgwood was at length enabled to bring his clay to the proper degree of compression, so as to be duly measured by his heat gauge.

Wedgwood had much correspondence with Sir Joseph Banks, president of the Royal Society. Many of Sir Joseph's early letters consisted of introductions of distinguished foreigners to Wedgwood, whose works at Etruria were considered one of the shows of the kingdom. One of the most interesting was the letter to Wedgwood announcing that he had been elected a Fellow of the Royal Society on the 16th of January, 1783. In a later letter Sir Joseph requested Wedgwood to select some person skilled in the mystery of potteries, to accompany Lord Macartney to the Emperor of China, and to acquaint himself with any mode of manufacture used by the Chinese of which the artists of this country were as yet ignorant. "To you, sir," he added, "who have always practised pottery as a science instead of an art, we naturally look up for advice where to meet with such a person."

Sir Joseph's letter of the 6th of April, 1784, relates to Wedgwood's thermometer, and other affairs :

"DEAR SIR : Your paper proposing a mode of connecting the scale of your thermometer with

Fahrenheit's I have received and read with care. The whole meets with my entire approbation, and I shall take the first opportunity in my power to read it to the Royal Society. One thing, however, I must remark, which is that you seem not to have heard of the experiments made last winter at Hudson's Bay, by which the point at which mercury congeals into a malleable metal is fixed to be 40° below zero on Fahrenheit's thermometer. All points of cold, therefore, below that which have been observed by a mercurial thermometer must be set aside. It is a matter of no consequence to you, only will cause a trifling alteration in the notes on the scale of your thermometer.

“You are, believe me, good sir, much wanted here. We attend the club [Athenian*] with tolerable regularity. Hodgson makes punch and talks politics; Griffiths drinks it and makes jokes; but we all look out for your assistance.

“We have had a series of disputes at the Royal Society which have employed us fully from Christmas to Easter. Now, however, the disaffected, at least the active ones, who were at first forty-seven, are reduced to two. I think we have a fair prospect of peace returning, which, too, is likely to be permanent.

“We have no signs of spring here—not a

* Of which Mr. Wedgwood was the father, or oldest member.

shade of green on a hedge or a gooseberry bush unfolded. This day, however, cloudy and rainy, with wind; nevertheless, the thermometer rises—a good symptom.

“Yours faithfully,

“JOS. BANKS.”

In a letter to Dr. Priestley, then at Paris, Wedgwood says (2d September, 1791): “M. Lavoisier has sent for two of my thermometers, which I have accordingly forwarded to him. M. Seguin says: ‘We find this instrument of the greatest use, and at this moment we feel more than ever its indispensability, because we are employing ourselves (M. Lavoisier and I) in completing the theory of furnaces of fusion, but we are still in need of some instructions, which we pray you to be pleased to give us.’”

Wedgwood’s papers to the Royal Society were translated into French, Dutch, and other foreign languages. Indeed, Wedgwood had as great a scientific and artistic reputation abroad as he had at home. In Sweden his papers were voluminously reprinted. The Royal Academy of Sciences at Upsala (the Swedish University near Stockholm) not only possesses the “Transactions” of Josiah Wedgwood, with a copious table of contents, in five volumes, but also his “Chemical Collections,” consisting of many valuable articles and memoranda on assaying,

metallurgy, dyeing, painting on glass, glazing for porcelain earths, cements, coloring matter, furnaces, and so on, with tables of specific gravities, also in five volumes. Both of these series (according to the catalogue in the British Museum) have been translated from the Swedish and German, with some pieces from original sources, by Dr. W. Lewis, author of "Experimental History of the Materia Medica." These documents are very neatly written, and illustrated with drawings. Ten volumes, royal 8vo.*

Considerable progress has inevitably been made in the measuring of intense heat. A new method was invented by Mr. Gurney, which he employed in his chemical lectures, for ascertaining the relative expansibility of the various metals that can be drawn into wire. But the most important improvement in the pyrometer was that invented by Professor Daniell in 1821, which has, for the most part, superseded all others; though Wedgwood's use of clay, in the form of porcelain, is still used in his invention. Mr. Ericsson, a great inventor, has also exerted his genius in endeavoring to form another description of pyrometer. But here we must leave the subject, as our object has been merely

*The Wedgwood MSS. collection in the British Museum. The Press marks are:

Additional MSS. 28,309-313.

Do. do. 28,314-318.

to show what Wedgwood did in advancing the science of the intense-heat-measurer.

Wedgwood, ever inventing and ever improving, introduced in 1785 a "jasper-dip," in which the clay vessels were dipped and received a coating of jasper, instead of being formed of that body throughout. This enabled the jasperware to be sold at a much cheaper rate, yet without any decrease in the beauty of the manufacture. Wedgwood's ordinary trade continued to increase. He sent large consignments of goods to Russia; and, notwithstanding the almost prohibitory duties, he received many orders from Germany, Italy, and even France. He continued to add ornamentation to utility. Even in his chimney-pieces he introduced some of his most artistic designs.

Wedgwood was of opinion that the fireplace should be the most cheerful part of the house. There the family assembled and indulged in their homely talk. Here strangers were admitted and joined in the conversation. Why should not the chimney-piece, to which they all gazed, be made bright, cheerful, and represent artistic objects? This was the reason why he devoted so much attention to his chimney-pieces, and invited Flaxman to assist him with his beautiful designs of cameos and bas-reliefs from the antique as well as from his own imaginative handicraft.

Wedgwood had the greatest difficulty in re-

taining his best workmen. Foreigners prowled about his works, got into conversation with the men, and endeavored to bribe them to take service in foreign countries. Boulton and Watt of Birmingham were also besieged by the same adventurers, so that they were forced to close their gates against all piratical foreign workmen.

A good deal of lawlessness prevailed in the manufacturing districts about that time. The cotton-spinners in Lancashire went from mill to mill to break down the machinery by which they earned their living. The working-people thought that when any of their own number founded an industry and made it profitable it was all for their own advantage, and tended to the misery of the poor. Their capital was all stolen from the work-people! Troops were brought out to put an end to the cotton-spinners' strike. The same lawlessness prevailed in Staffordshire. The men who worked at the potteries could only go home in bands to protect themselves against the highwaymen who paraded the roads. The men who worked at Etruria dared not quit the works singly or unarmed. The police were set upon the highwaymen; some of whom were arrested, committed, and tried at Stafford, but the depredations continued. A mob seized one of Wedgwood's boats filled with goods for Manchester; it was rifled of its contents, which were sold at any

prices they would fetch. We find among the Wedgwood papers a letter from Ashton Lever (27th September, 1781) as to the fragments of the *Holophuricon*, which had been blown to pieces by a wagon-load of gunpowder at Talko'-th'-Hill.

Wedgwood was under the impression that his works were threatened. He despatched messengers to Newcastle-under-Lyme, and the result was that a company of the Welsh Fusiliers and a detachment of the Staffordshire militia arrived at Etruria. Several of the highwaymen were seized and tried; one of them was hanged, and the turmoil was thus put an end to. No doubt great distress existed. The war with America was on foot, and every thing was thrown into confusion at home. Factories were closed, and many men, both in Lancashire and the potteries, were thrown out of work. Yet Etruria was always ready to give employment to those who were willing to give their industry for good wages.

When every thing had in a manner settled down, Wedgwood published a small pamphlet on the folly of such outbreaks for the redress of social wrongs, entitled "An Address to the Young Inhabitants of the Pottery," which he distributed among his workpeople. In the course of this pamphlet he said: "I would request you to ask your parents for a description of the country we inhabit when they first

knew it; and they will tell you that the inhabitants bore all the signs of poverty to a much greater degree than they do now. Their houses were miserable huts; the lands were poorly cultivated, and yielded little of value for the food of man or beast; and these disadvantages, with roads almost impassable, might be said to have cut off our part of the country from the rest of the world, besides not rendering it very comfortable to ourselves. Compare this picture, which I know to be a true one, with the present state of the same country: the workmen earning nearly double their former wages, their houses mostly new and comfortable, and the lands, roads, and every other circumstance bearing evident marks of the most pleasing and rapid improvements. . . Industry has been the parent of this happy change. A well-directed and long-continued series of industrious exertions, both in masters and servants, has so changed for the better the face of our country, its buildings, lands, roads (he might have added canals), and, notwithstanding the present unfavorable appearances, I must say the manner and deportment of its inhabitants, too, have been such as to attract the notice and admiration of countries which had scarcely heard of us before; and how far these improvements may still be carried on by the same laudable means which have brought us thus far, has been one of the most pleasing contemplations of my life."

Wedgwood had still another pamphlet to issue. It has already been said that many efforts were made by foreigners and others to induce the best workmen to leave their employment in Staffordshire. A Mr. Bartlem induced some potters to follow him into South Carolina, but the result was very unsuccessful. Others went to Pennsylvania. A few went to France and Germany, but they did not succeed. Wedgwood proceeded to address the Staffordshire men on the subject of entering into the service of foreign manufacturers. He pleaded with them that they should not wantonly throw into the hands of foreigners, perhaps of enemies, the superiority the potters of Staffordshire had labored for and achieved. X

A Chamber of Commerce was established in 1785 for the purpose of maintaining the interests of British manufacturers. Wedgwood and Boulton were the leaders of this movement. The first meeting was held in London at the close of the year, and many of the leading manufacturers of England were present. Ireland had then home rule; but the Irish Parliament legislated in a hostile spirit toward English commerce. They imposed heavy taxes upon all manufactures imported into Ireland from England; while Irish manufactures were not only sent into England duty free, but their own Parliament encouraged their constituents by giving a bounty upon exportation. N

The Chamber of Commerce expostulated against the partial and unjust spirit of this legislation, and petitioned the British Parliament for free interchange on equal terms. James Watt, inventor of the condensing steam-engine, though averse to taking part in political movements, now came forward as a pamphleteer. He endeavored to show that the true way of encouraging manufacturers in Ireland was, not by bounties, nor by prohibitions, but by an entire freedom of industry between the two countries. He held that the best mode of giving the Irish manufacturers vigor was by having recourse to British manufacturers possessed of capital, industry, and knowledge of trade. "It is contemptible nonsense," he said, "to argue that because Ireland has never had manufactories; she cannot have them now. One hundred years ago the Irish had no linen manufactories, they imported linen, and now they sell us to the extent of a million annually! How came this about? The tyranny of the Scotch Privy Council under Charles II. chased the people out of Scotland because they were Presbyterians. Ireland received and protected them; they peopled the northern provinces; many of them were weavers; they followed their business in Ireland, and taught others. Philip II. chased the inhabitants out of Flanders on account of religion. Queen Elizabeth received and protected them." Then came the large im-

portation of the Huguenots through the persecution of Louis XIV., and large manufactories were established both in England and Ireland.

Toward the end of his statement Watt asks: "Would it not be more manly and proper at once to invite the Irish to come into a perfect union with Britain, and to pay the same duties and excise that we do? Then every distinction of country might with justice be done away with, and they would have a fair claim to all the advantages which we enjoy."

The result of the agitation of the Chamber of Commerce was that most of the proposals to impose new taxes on the raw materials of manufacture were withdrawn by the Ministry, and the Irish resolutions were considerably modified. The delegates separated, with the resolution to extend and maintain their organization in the manufacturing districts. X

To return to Wedgwood's career. His foreign trade continued to increase, especially after the commercial treaty with France had been entered into in September, 1786—a few years before the French Revolution took place. Russia was one of his best customers for ornamental wares; but Holland, Germany, Italy, and even Spain, were alive to the merits of his manufactures. After the departure of Flaxman for Rome Wedgwood had several excellent N

modellers. Among these Webber was one of the best. He had also the assistance of Westmacott and Wyatt, then very young men. Lochee, great in modelling gems and small objects, was another admirable artist employed by Wedgwood.

As old friends passed away new ones made their appearance. Sir Joshua Reynolds painted Wedgwood's portrait, as well as that of his wife, in 1783; and Wedgwood produced a medallion of the artist, modelled by Flaxman. After the death of Sir Joshua, a few years later, this medallion became very popular. Romney was another of Wedgwood's friends. We find him thanking the potter "for his very kind and obliging offer to let him have any of his elegant ware to sketch from when Mr. Romney is in want of ornaments. I will call upon you on the first opportunity."

Lady Templeton must have been a very good friend of Wedgwood. She admired his works so much that on several occasions she lent him several of her charming groups of children, which Wedgwood copied in his beautiful jasper bas-reliefs. The first was sent on the 27th June, 1783, and the second some months later. The bas-reliefs on this occasion were used on the queen's opera-glass. They were made by Wedgwood after the designs of Lady Templeton. One represented Sterne's Maria, the other a Bourbonnais shepherdess. Another of her

examples was a ring of great beauty—the subject Jupiter. Had Lady Templeton been a poorer woman she might have made a fortune by her wonderful gifts.

Wedgwood was also a friend, as well as a good customer, of Wright of Derby. We find him in 1784 receiving from Wright a picture of the Maid of Corinth, as well as a portrait of Erasmus Darwin. Wright had before spoken of it as “a sweet subject,” and it was painted to Wedgwood’s satisfaction. He had before sent a sketch of Penelope and several other works. Hoppner must also have been a friend, because we find him in January, 1785, when he was a young man struggling for a position as a portrait-painter, requesting a loan of thirty pounds from Wedgwood; which the potter, with his generous disposition, immediately sent him. Hoppner at length struggled up the hill of difficulty, and was made a Royal Academician in 1795.

Among Wedgwood’s other correspondents about 1785 were Mr. Pitt, at Downing Street (making an appointment), Mr. Wilberforce, Mr. Sheridan, John Hunter, Granville Sharp, Sir Richard Arkwright, and Thomas Day; but their letters convey no special information. Before we conclude this chapter we may append the copy of a letter from Benjamin Franklin to Wedgwood in acknowledging one of his valuable presents :

“PHILADELPHIA, 15th May, 1787.

“SIR : I received the letter you did me the honor of writing to me on the 29th of February past, with your valuable present of cameos, which I am distributing among my friends ; in whose countenances I have seen such marks of being affected by contemplating the figure of the Suppliant (which is admirably executed)* that I am persuaded it may have an effect equal to that of the best written pamphlet in procuring favor to these oppressed people. Please to accept my hearty thanks, and believe me to be, with great esteem,

“Sir, your most obedient servant,

“B. FRANKLIN.”

* The Suppliant, “Am I not a man and a brother ?” was designed by that admirable artist Hackwood for the benefit of the Society for the Abolition of Slavery.

CHAPTER XX

THE BARBERINI OR PORTLAND VASE

THE Barberini or Portland vase, now in the British Museum, is perhaps the finest work of the kind made by the ancient Greeks. It was found deposited in a marble urn within a sepulchral monument, under the Monte del Grano, two and a half miles from Rome on the road to Frascati. From thence it came into the possession of the Barberini family; and when they desired in 1770 to raise money by the sale of their works of art, it was purchased by the antiquary Byres, and afterward sold by him to Sir William Hamilton.

Hamilton, in writing to Wedgwood about the purchase of the vase, said: "The person I bought it of at Rome will do me the justice to say that the superior excellence of this masterpiece of ancient art struck me so much at first sight that I eagerly asked: 'Is this yours? Will you sell it?' He answered: 'Yes, but never under one thousand pounds.' 'I will give you one thousand pounds,' and so I did, though God knows it was not very con-

venient for me, and the business was concluded in a moment.

“Except the Apollo-Belvedere, the Niobe, and two or three others of the first-class marbles, I do not believe that there are any monuments of antiquity existing that were executed by so great an artist ; and I have no doubt of this being a work of the time of Alexander the Great, and was probably brought out of Asia by Alexander Severus, whose ashes were deposited therein after his death.”

We find from the “Memoirs of Captain Rapin,” a gallant Huguenot, who fought at the Boyne, Athlone, and the two sieges of Limerick, that he was recalled to London for the purpose of being appointed governor and tutor to Lord Woodstock, son of Bentinck, Earl of Portland. The two, tutor and pupil, travelled through Holland, Germany, France, Spain, and Italy. It was while in Italy that the Earl of Portland requested Rapin to have copies made for him of the rarest medals in point of historic interest ; and also to purchase for him objects of ancient workmanship. It was in this way that Rapin persuaded the earl to purchase from Sir William Hamilton the Barberini, now called the Portland, vase, and thus to secure for England one of the most exquisite specimens of Grecian ceramic art. On resigning his office as tutor to Lord Woodstock Rapin retired to Wesel,

on the Lower Rhine, where he wrote his "History of England," which was afterward translated by Mr. N. Tindal, and achieved a great reputation.*

This world-renowned Barberini vase was the identical urn in which the ashes of the Roman Emperor Alexander Severus and his mother, Julia Mammœa, were deposited. It was placed under the monument on Monte del Grano about 235 years after Christ, and it was dug up by order of Pope Barberini, or Urban VIII., between the years 1623 and 1644. The materials of which the vase is composed resemble an agate, some say an onyx. The ground of the vase is of a rich transparent, dark amethystine color, and the bas-relief white figures which adorn it are of the most exquisite workmanship. The vase is $9\frac{3}{4}$ inches high, $7\frac{1}{4}$ inches in diameter, and $21\frac{3}{4}$ inches in circumference, and has two handles.

The probability is that the artistic manufacture of the vase was much more ancient than the date of its interment at Monte del Grano. The Emperor Alexander Severus was an enthusiastic collector of the finest specimens of ancient Greek art, and he desired that at the time of his death his ashes should be de-

* Raoul de Cazenove published a handsome volume entitled "Rapin-Thoyras, sa Famille, sa Vie, et ses Œuvres," which contains the fullest information as to the Huguenot hero.

posited in one of the finest of the Greek urns. The figures engraved in bas-relief on the urn in question have no reference to the life or deeds of the emperor.

There is Leda with the swan, before her Jupiter, a Cupid holding a bow, and on the outside of the bottom of the vase is a man (supposed to be Paris) with a Phrygian bonnet. This seems to have no connection with the emperor's history, or of his mother, Mammœa. Some think it is a satire upon the vices of Heliogabalus; others consider it a eulogium on the virtues of his immediate successor, Alexander Severus. But the whole subject is involved in mystery.

M. Marriet supposed that the cameos were porcelain, applied as a paste and burned to due hardness; and that with more heat it would become glossy like the Dresden porcelain. . . Applied to the glass when it came out of the mould, then passed with the glass vessel into the fire, after which the cameos would be amalgamated or soldered on. The glass foot is thought to have been cemented on after the bones or ashes had been placed in the urn.

The vase was bought by Sir William Hamilton from Byres, the antiquary, for £1000, and was afterward sold by him to the Duchess of Portland (the earl having died) for 1800 guineas, so that Sir William must have realized a considerable profit by his purchase. At the

sale of her Grace's property after her decease in 1786 the vase was *bought in* by the Portland family for £1029.

When Wedgwood heard that this splendid example of Grecian or Etruscan art was to be sold, he determined to possess the ancient gem. The young Duke of Portland also desired to retain its possession. It was put up for sale at the rooms of Skinner & Company. The bidding went on with spirit. Wedgwood bid to upward of a thousand pounds. Then the duke overbid him. At last the duke, seeing that there were only two bidders, stepped across the room and asked Wedgwood what was his object in endeavoring to possess the vase. "I wish to copy it," answered Wedgwood. "Then, if you will give over bidding," said the duke, "I will let you have the vase as long as you like, that you may effect your object." This proposal was as frankly accepted as it was frankly offered. The duke became the purchaser of the vase for £1029, and Wedgwood took with him to Etruria the priceless gem.

Then came the serious difficulty of copying the Portland vase. He studied the work with minute attention. He came to the conclusion that the figures on the vase could not have been moulded separately and applied afterward upon the body, but that the body, which is a deep-blue glass, had been coated over, in part at

least, while red hot, with a semi-transparent white enamel, and the figures formed by cutting through the coat down to the blue ground in the manner of real cameos, and that by this mode of working the artist had been enabled to superadd to the exquisite beauty of the sculpture the effect of light and shade, by cutting down the parts to greater or less thickness according as the shade was required to be deeper or lighter. By this means the blue underneath was more or less visible through the semi-transparent white relief. To work in this manner a vase of such magnitude so much time, labor, and skill would be required for the production of a single piece that no modern artist, however capable of the execution, would engage to perform the operation. Some thought that Wedgwood's endeavor to produce the same effect was a presumptuous attempt, especially in his own jasper compositions.

Wedgwood took a vast amount of advice before he proceeded with the work. While still busy studying the Portland vase, he wrote to Lord Auckland, then ambassador at Madrid. In the course of his letter Wedgwood said: "I employ several modellers constantly in Rome, and get what I can from Paris, and am very happy when I can have any thing done by my own artists in England; but my works are too small and delicate for them, so that little assistance can be obtained in England, except what is

done under my own eye at Etruria. You will perhaps wonder at your not having heard something of the Barberini vase. I was always very sensible of the difficulty of attempting to copy so exquisite a piece of workmanship ; but in the progress of the undertaking difficulties have occurred which nothing but practice could have discovered to me. The prospect, however, brightens before me, and after having made several defective copies I think I begin to see my way to the final completion of it. I shall take the liberty of troubling your Excellency with a further account of my progress in this great work,—for such you must permit me to call it,—as I advance nearer to the end.”

Wedgwood also took the advice of Sir William Hamilton, at one time the possessor of the Portland vase. Sir William replied :

“NAPLES, 24th July, 1786.

“SIR : I will not delay answering, as well as I am able, your letter of the 22d of last month. It gives me much satisfaction to find that the Barberini vase not only remains in England, but is in your hands, as I well know that no one can make a better use of it. . . You have seen so well into the difficulties you will have to encounter if you attempt an exact copy of this vase that I really have nothing to add to the reflections you have made on the subject, and I much approve of your beginning with the most

simple copies. I much approve, likewise, of your making copies of single figures, and even of the heads. In short, you cannot multiply this wonderful performance too much; but I am convinced, as you say, that an exact copy of the vase finished by the engraver would be too expensive to find a purchaser in Europe.

“I admire your enthusiasm on the frequent and close examination of the vase, and am happy that its superior merit is felt by some few in England. I saw it every day for above a year, and protest that I admired it more and more. You are very right in there being some little defects in the drawing. It would, however, be dangerous to touch that, but I should highly approve of your restoring in your copies what has been damaged by the hand of Time. The side where the female figure has a torch reversed is perfectly preserved, and the other should be made as like it as possible.

“I should have thought that my friend Flaxman would have been of use to you in your present undertaking, for I must do him the justice to say that I never saw a bas-relief executed in the true simple antique style half so well as that he did of the Apotheosis of Homer from one of my vases, and one of which you were so good as to send me. X

“Your ornamental flower-pots and other pieces of work are much admired here, but for a piece you sell for twelve shillings they ask at least

two guineas, so that there are few purchasers. If you could, instead of sky-blue, make your ground look like an onyx as in the vase itself, it would be better, for there is no natural stone of the sky-blue color. Unless you hold up the Barberini vase to the light it appears to be of a real onyx, and was long mistaken for one.

“I most heartily wish you success in your present arduous task. Follow your own judgment, for I am sure no one can see clearer into the merit of the original and the difficulty of copying it than you do. I think, with you, the form might be more elegant, and I would try to make one more elegant, but it must be simple.

“Your most obedient,

“W^M. HAMILTON.”

Wedgwood replied to this letter, thanking Sir William for his great efforts to advance the arts in his native country and for the splendid vases which he had placed in the British Museum. He also thanked him for the models in clay taken from the statues he had dug up at Herculaneum. He promised to inform Sir William of the excellent new modellers he had employed—principally Mr. Webber on the recommendation of Sir Joshua Reynolds and Sir William Chambers.

“Thus you see, sir,” Wedgwood continued, “I am laying foundations, and in some measure

sacrificing the present for the future ; but I shall not in the meantime leave myself altogether without resources. I have an excellent modeller here, who has been some years under Mr. Webber's instructions, and Mr. Banks, a very able statuary, in London, whom you must have known in Italy, and another artist in town, both of whom have promised to employ all the time they can spare for me. . .

“I have likewise many chimney-pieces in hand, some of which, with the vases and figures that are to go along with them, will be very tedious and expensive. But my great work is the Portland vase. I have now finished a third and last edition of the figures, the two first being suppressed in hopes of making the third still more perfect. In this I have certainly succeeded, but how far I have done so upon the whole, and with what success, others must determine. My present difficulty is to give those beautiful shades to the thin and distant parts of the figures, for which the original artist availed himself of the semi-transparency of the white glass, cutting it down nearer and nearer to the blue ground in proportion as he wished to increase the depth of shade. But the case is very different with me. I must depend upon an agent whose effects are neither at my command nor to be perceived at the time they are produced, viz., the action of fire on my compositions. A little more or a

little less fire, and even the length of time employed in producing the same degree, will make a very material difference in this delicate operation. I am now engaged in a course of experiments for determining these points with as much precision as the nature of the case will admit of, and this is now the only thing that retards the completion of this grand object.

“I long much to see the copies you are so good as to send me, of those fine works of antiquity, and you may depend upon seeing the first productions from them with all the despatch I am able to make. My best thanks, accompanied as they are with the sincerest gratitude and highest respect, to your Excellency are a poor return for these repeated instances of your goodness to me.”

At length, by introducing other expedients where the hand of the modeller was insufficient, Wedgwood in 1790, after many unsuccessful trials, produced copies of the Portland vase which, after a strict comparison with the original, gave perfect satisfaction to the most distinguished artists in Great Britain. For the satisfaction of those who could not have an opportunity of making such comparison themselves he thought it necessary to have the accuracy of some of the copies authenticated in the fullest manner by men of the highest distinction : in the first place by the possessor of the vase itself, the Duke of Portland ; then

by Sir Joseph Banks, president of the Royal Society ; by the Earl of Leicester, president of the Society of Antiquarians ; and by Sir Joshua Reynolds, president of the Royal Academy of Arts. Sir Joshua was pleased to add that he “ can venture to declare it a correct and faithful imitation, both in regard to the general effect and the most minute detail of the parts.”

Wedgwood had the Portland vase in his possession for more than twelve months, and during that time he made fifty copies, which were subscribed for at fifty guineas each. Yet the sum thus realized fell far short of his actual outlay in making them. Wedgwood himself regarded it as his *chef-d'œuvre*. Like his other works, his copy of the vase greatly increased in value after his death. At Mr. Rogers' sale one of them was sold for 127 guineas ; and on the 24th of March, 1892, another copy, belonging to the late Mr. Holt of Liverpool, was sold at Christie's for 205 guineas. X

When Sir William Hamilton next visited England, it was partly for the purpose of seeing the copy of the Portland vase. After his visit to Etruria he sent the following letter to Wedgwood :

“NEWCASTLE-UNDER-LYME,

“ 23d July, 1790.

“ SIR : Not having had the good fortune to meet with you in London, I determined to take

Etruria on my way to Derbyshire, where I am going to make a visit. I am now just returning from your house, and much disappointed at not having had the pleasure of finding either you or my Naples acquaintance at home. However, I have accomplished one of my great objects, which was the seeing your wonderful copy of the Portland vase. I am so well acquainted with the original, and the difficulties you must have met with, that I really think it is so. The sublime character of the original is wonderfully preserved in your copy, and little more is wanting than the sort of transparency which your materials could not imitate to induce those not quite so knowing as you and I are to mistake it for the original. In short, I am wonderfully pleased with it, and give you the greatest credit for having arrived so near the imitation of what I believe to be the first specimen of the excellence of the arts of the ancients existing. . . I saw the models of some bas-reliefs that the young man you employ at Rome has done for you, and I think them excellent. Flaxman goes on improving daily, and is in my opinion the greatest genius we have at Rome. He is attempting a marble group as big as the Laocoön, and I think will succeed wonderfully. . .

“I am, sir, etc.,

“WM. HAMILTON.”

In the course of the same year Wedgwood published his "Dissertation on the Portland Vase," in which he detailed the results of his observations as to the processes employed in its original manufacture; and he explained his views as to the meaning of the groups of figures which embellished it. Several of these explanations are manifestly erroneous, having probably been formed from inaccurate drawings, in which the right hand is often mistaken for the left, and the male figures for female. All of them, indeed, are merely conjectural; and it is not to be wondered at that the warm imagination of Wedgwood, with the beautiful original before his eyes, should have made mistakes; yet his "Dissertation," we believe, will do no discredit either to his genius or his taste.

Wedgwood's enterprise, notwithstanding his increasing years, was not upon the wane. In 1790 he went to Meissen, near Dresden, to visit the royal factory maintained by the King of Saxony. It had become unable to pay its expenses, and was a heavy drain upon the sovereign's privy purse. After visiting the factory Wedgwood was so convinced of its capabilities, if under good management, that he offered a payment of three thousand pounds a year to be allowed to take it entirely upon himself, but his offer was refused.*

* "History of Pottery and Porcelain," by Joseph Marryat. Murray, 1868.

At length the king became tired of the annual expense, and ceded the porcelain factory to the Finance Department, who continued it to their loss. The kaolin at Aue had been nearly exhausted. The factory is now reduced to a low ebb, and produces only inferior articles. It was well for Wedgwood that his offer was refused, and that he was under the necessity of returning to England, and carrying on his still prosperous business at Etruria.

Long after the Portland vase had passed out of Wedgwood's hands, and been deposited in the British Museum, a lunatic named William Lloyd smashed the vase to pieces in 1845. The man was apprehended, and paid the fine imposed by the magistrates rather than undergo imprisonment. The pieces of the vase were carefully gathered together, and joined so perfectly by Mr. Doubleday that a blemish can scarcely be detected ; and the restored vase, with one of Wedgwood's copies, is now deposited in the medal-room of the Museum.

CHAPTER XXI

WEDGWOOD'S PERSONAL HISTORY—HIS SONS' EDUCATION

NOTWITHSTANDING the various works in which he was engaged, Wedgwood never neglected the interests of his family. The most complete domestic happiness was added to the general prosperity with which his days were blessed. He was happy in his wife, to whom he necessarily left the infancy of his children and, to a certain extent, the training of his daughters ; but to the education of his sons, after they had emerged from the period of childhood, he paid especial attention.

From the age at which the mind begins to unfold its powers, and becomes sensible of having a part to maintain among men, the training of his sons was in the main his own. He lived with his children as with friends, in an easy and unrestrained manner. He showed them entire confidence, which they faithfully returned. He permitted no deception or imposition to be practised by them, even in jocularity, thus precluding all falsehood and dissimulation.

In short, he treated his children, from infancy to manhood, as rational beings. Another important point in his treatment of his boys and girls was to give them habits of enquiring and examining for themselves, thus elucidating the valuable talent of impartial judgment. More happy and respected, and perhaps less restrained, at home than elsewhere, they had no inducement to seek further intercourse with the world until their judgment and habits were fully formed.

We have already referred to the ardor with which Wedgwood, in the company of his sons, carried on their chemical experiments on gas, on clay, and all manner of materials. In October, 1785, Wedgwood sent his eldest son, John, to the University of Edinburgh. There he was introduced by Dr. Darwin to Dr. Joseph Black, lecturer on chemistry, and the discoverer of latent heat, which so much helped James Watt in his development of the condensing steam-engine. Young Wedgwood made many other friends in Edinburgh. He was introduced to the principal, "who seemed very much pleased with Josiah Wedgwood's bas-reliefs." He also made friends with Drs. Rutherford, Duncan, Hutton, and Robison, whose lectures he attended.

After John's session he went with Mr. Byerley to Paris, in order to perfect himself in the French language, and there he lived with M. Teulierc. Wedgwood wrote to his

son from Etruria that he had been told by Mr. Byerley that there was no good water in Paris to drink, and that he was obliged to depart from his usual regimen and drink wine, by which his health had suffered considerably.

“He tells me [said the father] that you are obliged to do the same. I have explained myself fully to Mr. Byerley on this subject, both with respect to himself and to you. In three words, nothing, no advantage whatever, can in my mind compensate to either of you for being in such a situation. You know my rooted and well-founded objections to young people accustoming themselves to the use of fermented liquors. Habits of this kind are soon formed. They increase, and rivet themselves imperceptibly both on body and mind. They cannot be too soon or too earnestly guarded against. May God preserve my dear son from this and all other evil habits is the prayer of your affectionate father,

J. W.”

In a future letter John said he had visited the Duc de la Rochefoucauld, by whom he was kindly received, and also M. Lavoisier, the chemist, with whom he dined. Lavoisier was one of the most distinguished philosophers in France, whose head was afterward cut off by the guillotine because the Revolutionists “had no need of philosophers in Paris.”

After visiting the Sèvres manufactory, in 1786, in the company of Boulton and Watt of Birmingham, young Wedgwood proposed to make a residence in the country, where the people spoke good French, and where he would not be distracted by the amusements and revels of Paris. His father agreed, and requested him to keep a diary or commonplace book in which he might note down all that he saw of interest or importance.

The next letter we have from young Wedgwood is dated from the house of M. Pictet, professor of philosophy at Geneva (28th November, 1787). He expresses his warmest gratitude to his father for sending his brother Tom to the University of Edinburgh, and also for his intention to send him to join his brothers at Geneva, to be instructed by M. Pictet. Josiah Wedgwood seems to have been most grateful for the intellectual training his sons had received from the good philosopher.

Young Wedgwood's next journey with his brother was to Rome, whither they went to see the ancient Greek sculptures. His father wrote to Sir William Hamilton :

“DEAR SIR : After acquainting you with my sons' going to Rome, accompanied by Weber, my principal artist, and after the experience I have had of your goodness on former occasions, you will not be surprised if I request

your protection of them. I know you will embrace every opportunity that may happen for promoting the studies of these two young men, who travel, as I hope they do, mainly for improvement.

“I have the honor to be, etc., yours,
“JOS. WEDGWOOD.”

The young men went to Naples, and were graciously received by Sir William, who exhibited to them all his collection of antiquities.

“NAPLES, 29th April, 1788.

“Flaxman has drawn some of my vases, which were dug up near Naples, but his health did not permit him to stay long in this neighborhood. Your sons liked the country so well as to make a second visit, and I was really glad to see them, as I can assure you that their behavior was such as to give universal satisfaction. You will probably have heard of them since their return to Rome. . . I most sincerely wish you a continuance of health and success in your noble efforts in propagating a good taste in your country.

“Yours ever, etc.,
“WM. HAMILTON.”

After his return to England, before settling down to business at Etruria, young Wedgwood made a home tour. Josiah Wedgwood wrote to

Lord Auckland, then ambassador at Madrid (5th July, 1789): "My son has been at home nearly six months. He is now on a tour of discovery in his own country,—Wales, the west of England as far as the Land's End,—along with a Mr. Hawkins, an excellent mineralogist, of Cornwall, with whom he became acquainted abroad; otherwise he would gladly have embraced the opportunity of thanking you for your friendly notice of him."

After his return from the Land's End young Josiah began to be of use to his father in the business at Etruria. He conducted the correspondence in the absence of his senior, and made himself acquainted, when in London, with the various commercial and manufacturing affairs of the home factory. It was in a manner necessary for him to do this, as John Wedgwood, his father's relative and partner (so far as the useful wares were concerned), died in the course of the same year, 1788, and thus the elder Josiah was left sole proprietor of the great establishment he had founded.

This, however, could soon be remedied. In January, 1790, Wedgwood took into partnership his three sons, John, Josiah, and Thomas, and his nephew Byerley, the latter having an eighth share of the profits. He had already for a time managed the London business, and eventually took an active share in the commercial part of the concern at Etruria. John and

Thomas Wedgwood afterward retired, the one to become a junior partner in the London and Middlesex Bank, and the other to devote himself to chemical and scientific pursuits—among others, to heliotypy or photography. After that the firm was known as that of Josiah Wedgwood, Sons & Byerley.

Wedgwood had constant correspondence with Dr. Darwin. On one occasion we find Dr. Darwin asking for information about his first wooden leg. It had been first made by Addison, a lay-figure maker in Hanover Street, Long-acre, about eighteen years ago ; but since then an ingenious joiner had made them at home. "He is making me a new one now, which, I believe, is nearly finished. He has made me one or two before, and has had the care of the old one for many years. It has received so many repairs from him that it has now become almost like the sailor's knife which had so many new blades and so many new hafts. He is willing to make one for the gentleman you mention."

Wedgwood for many long years was much troubled by his wooden leg. It was always in the way and often interfered with his health. By preventing him taking exercise he thought it made him bilious. He was often prevented walking, except on crutches, even to serve his most noble customers. When he was requisitioned to serve as an overseer of the poor in the

parish of St. Ann's, Soho (in which his warehouse in Greek Street was situated), on the advice of J. Balgeny, his counsel, he declined the office on the ground that he did not live in London, and also because of "having been deprived of a leg, and being obliged to use a wooden one." His pleas were admitted.

Dr. Darwin again wrote to Wedgwood when writing his "Botanic Garden." "If you wish the speech of Hope* longer, send me what materials you would have added, as suppose:

" Here future Newtons shall explore the skies,
Here future Priestleys, future Wedgwoods rise.

Now, in return, remember you are to send me a drawing of Cupid Warming a Butterfly."

On the 22d of February, 1789, Dr. Darwin wrote to Wedgwood: "Herewith you will receive the 'Botanic Garden,' of which I am the *supposed*, not the *avowed*, author. I intend to scold you for not making Derby on your way to and from London. This I shall, however, postpone till we have the pleasure of seeing you here."

On a future occasion Dr. Darwin asked Wedgwood as to his merits as a potter. His reply was: "To your first question, I only pretend to have attempted to copy the fine antique forms, but not with absolute servility; I have endeavored to preserve the style and spirit—or,

* "Hope" was modelled by Webber.

if you please, the elegant simplicity of the antique forms, and, in so doing, to introduce all the variety I am able; and this Sir William Hamilton assures me that I may venture to do, and that it is the true way of copying the antique.

“To your second, viz., ‘Was any thing of consequence done in the medallion or cameo kind before you, in real stones, or in imitation of real stones, in paste or soft colored glasses?’ Much has formerly been done. Witness the Portland vase, and numberless pieces of inferior note. Bas-reliefs of various sizes have likewise been made of a coarse brown earth of one color. But of the improved kind of two or more colors, and a true peculiar texture, none were made by the ancients, or attempted by the moderns that I could hear of, till some of them began to copy in an inferior manner my jasper cameos. But this sounds so like blowing my own trumpet that I shall say no more.”

Wedgwood might have written a better answer to Dr. Darwin had he copied his statement to the court (27th July, 1771) when he defended his action against the persons who desired to infringe his solitary patent. He then averred that he “has been brought up to the business of a potter in Staffordshire, where he practised this art, along with that of enamelling, as a master for upward of twenty years. . . X
He has enriched the pottery of his country with

many inventions and improvements, whereby pottery has been raised from a low and declining state to its present condition of one of the most flourishing manufactures in his Majesty's dominions.

“He first invented the art of ornamenting ware with colored glazes of various kinds.

“He first adapted the engine lathe to the working upon clay, and introduced the use of it into the pottery manufacture.

“He introduced the queen's ware, which banished the French ware from our markets and tables.

“His experiments on clays enabled him to introduce many new ornaments of many kinds, especially vases, cameos, tablets, portraits, and classical models in jasper, etc.

“The object of the action is to prohibit a London manufacturer infringing Wedgwood's patent for producing Etruscan vases in a certain manner.”

Meanwhile Wedgwood carried on his business at Etruria in the old way. Wherever he could make an improvement he introduced it. Flaxman sent him new casts and drawings from Rome. Deveare sent him a bas-relief of Proserpine from the Borghese vase, executed in the most beautiful manner. Webber followed him to Rome and sent to Greek Street some exquisite models. But Wedgwood had other assistants in Italy, the chief of whom was Dalmazzoni.

He also had several excellent artists under him, Flaxman being principally engaged upon his own works in sculpture. Pacetti and Angelini also modelled for Wedgwood. Fradotti and Mangiarotti were his chief cameo engravers, as well as Angelini. The models sent to Wedgwood from Italy were very numerous. NS

But now his active life seemed coming to a close, for though his mind was still as active as ever, his physique was failing. He took frequent holidays, and occasionally went to Buxton and Blackpool, sometimes making a tour in the Lake District. When at home, he took to gardening, and we find him writing a long letter to Dr. Darwin about the qualities of a gardener. Dr. Darwin continued to be one of his most intimate friends, and they often met for the purpose of renewing the old scientific discussions.

Wedgwood did not confine himself to his own domestic concerns. He had long correspondences with Miss Anna Seward and Thomas Clarkson about the abolition of the slave-trade. On one occasion Clarkson wrote a long letter to Wedgwood about "the cause in which we are mutually engaged." Clarkson was then considering whether he ought to continue his efforts or retire into private life. He had been engaged in the agitation for seven years. His mind and body had been greatly injured, and though comparatively a poor man, he X

had expended not less than fifteen hundred pounds. If he had to meet the numerous calls made upon him, he must be "inevitably ruined." Upon this statement Wedgwood helped Clarkson liberally, and the prime mover of slavery abolition pursued his course with cheerfulness. Had not Wedgwood produced the kneeling suppliant with the appeal, "Am I not a man and a brother?"

Wedgwood did not confine his generosity to the black slaves of the East Indies; he also subscribed (in January, 1792) one hundred pounds "toward the succor of the people of Poland," and his three sons subscribed fifty pounds each.

At one time Wedgwood spoke of spending the summer in Germany, and after seeing Florence and Venice returning with his son directly to England, but, with the exception of his journey to Meissen, with the object of looking over the manufactory there, he did not make his journey to Italy. In 1790 Wedgwood wrote to his agent Deveare in Rome: "I am rejoiced, with the rest of your friends here, in the hopes of seeing you and Mr. Flaxman returning safe to your native country. . . . You say I pointed out to you not to lose time. If I did so, I had no other meaning in it than when I told Mr. Flaxman that you might send the model without loss of time." Deveare afterward went to Etruria as a modeller for Wedgwood, where he was known as John de Vere.

Wedgwood was gradually withdrawing from the active part of his business. Yet he could not entirely withdraw. To Dr. Darwin he wrote in 1788: "I sigh that I am becoming an old man—that age and infirmities overtake me, and more than whisper in my ear that it is time to diminish rather than increase the objects of my attention." And yet he was only fifty-two years old, an age at which many men consider themselves in the prime of life.

Wedgwood did not forget his old friends. He specially remembered Dr. Priestley, his bosom friend next to Darwin. He had long admired and followed Priestley's enthusiasm for chemistry, and, knowing that the doctor's salary from his congregation was small, Boulton, Wedgwood, and Darwin took private counsel together as to the best means of providing him with funds to carry on what Dr. Darwin called his "fine vein of experiments." X

Wedgwood had an interview with Priestley, who communicated to him that he never thought of receiving any pecuniary advantage from any of his experiments, but gave them to the public with the results, just as they happened, and he should continue to do so without ever attempting to make any private emolument for himself. This was an excellent idea—pursuing science for science' sake. Nevertheless, he could not deny that he required some help, and the matter was arranged to the great credit of

all concerned. The members of the Lunar Society* subscribed, and several other private friends of Priestley. Wedgwood subscribed twenty-five guineas a year, and the subscription was continued, after Wedgwood's death, by his son Josiah to the end of Dr. Priestley's life.

Wedgwood, notwithstanding his declining health, continued to take some interest in science. In 1790 he sent his last paper to the "Philosophical Transactions." † It related to a mineral substance which had been sent to him from New South Wales. It consisted of pure plumbago or black lead. With this mineral Sir Joseph Banks had sent him some clay from the same colony, which he found to be of excellent quality. Webber modelled a medallion from it representing the figure of Hope standing on a rock, with three typical personages before her, exquisitely finished.

Wedgwood was still far from well. He went to Buxton and Blackpool for the benefit of his health. He again suffered from spectra in his eyes. He was seized with asthma, and the pain in his amputated limb greatly affected him. On his return home he amused himself with his garden, accompanied by his daughters. His

* The Lunar Society was a coterie of literary and scientific men who met at Birmingham monthly at full moon to enable distant members to drive home by moonlight.

† "Philosophical Transactions," vols. lxxiv. and lxxvi.

grounds were laid out in the most beautiful manner, and every thing, except their owner, was bright and cheerful. Downes, the gardener, was most successful in his production of hot-house grapes, and a bowling-green was laid down for the use of his neighbors, though his wooden leg prevented his playing with them.

Guests still came to Etruria Hall, and were hospitably entertained. Foreigners from every country were frequent visitors, and were for the time made happy in the survey of the beautiful works of art which the Hall contained. All Wedgwood's best productions were there—vases, bas-reliefs, cameos, medallions, and his other famous works of art. But though Wedgwood strove to entertain his swarms of visitors, nothing could cure the proprietor of this casket of learning and art.

His generous contributions to the aid of all good measures remained the same as before, or were even increased. His subscriptions to philanthropic and benevolent societies, to the struggling Poles, for the abolition of the slave-trade, and for the relief of the loyalist French emigrants who flooded England after the outbreak of the French Revolution, were large and bountiful. He started a free library and sick fund for the benefit of his work-people when such help was very unusual. He was the great friend of parliamentary reform, and entertained

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the opinion that all measures of improvement should be argued out and established by Parliament. To his son Josiah he wrote: "A real parliamentary reform is, therefore, what we most stand in need of, and for this I would willingly devote my time, the most precious thing I have, or any thing else by which I could serve so noble a cause."

As another instance of Wedgwood's liberality in respect of the advancement of art it may be mentioned that in 1792 he offered one thousand pounds toward the establishment of a national gallery of sculpture, which was declined. Professor Cockerell, when examined before a committee of the House of Commons on the establishment of schools of art in 1836, thus spoke of Wedgwood's offer: "I beg leave to mention an anecdote of the late Mr. Wedgwood, related to me by Mr. Cumberland of Bristol, who wrote a pamphlet in 1792 recommending a national gallery of sculpture, casts from the antique, etc., viz., that Mr. Wedgwood made a tender of one thousand pounds in aid of such an institution. I beg further to state that I have found Wedgwood's works esteemed in all parts of Europe, and placed in the most precious collections of this description of works."

Wedgwood was occupied by experiments on a cheaper glaze for ordinary pottery when he was again prostrated by illness. His health was evidently failing. Asthma returned in an

aggravated form. The pain returned in the nerves of the amputated leg. His debility was greater than usual. What was a new thing was a pain in his right jaw. He went to Buxton as usual, and on his return he felt so much better that his son and himself wrote cheerfully to Dr. Darwin as to his amendment. The doctor replied in a letter dated the 9th December, 1794, in which he said :

“Your letter gives me great pleasure in assuring me, what your son Josiah had before mentioned, that you have become free from your complaint. The ceasing of the palpitation of your heart, and of the intermission of your pulse, is another proof of your increase of strength. In respect to your breath being less free in walking uphill, I ascribe to the distant approach of age, and not to asthma. You know how unwilling we all are to grow old. As you are so well, I advise you to leave off the bark and take no medicine at present.”

A few days after the date of the doctor's letters Wedgwood's right cheek began to swell. Thinking it was caused by toothache, he sent for Mr. Bent to draw the tooth. On inspecting the interior of his mouth the surgeon, to his dismay, found the beginnings of gangrene. Dr. Darwin came over from Derby, and called in two other physicians, but nothing could be done. The patient gradually grew worse. The

inflammation extended into his throat. The fever increased, he became insensible, and he unconsciously passed away on the 3d of January, 1795, in the sixty-fifth year of his age. Three days after he was buried in the porchway of the old parish church of Stoke.

CHAPTER XXII

CHARACTER OF WEDGWOOD

WEDGWOOD died nearly a century ago, but the seed which he sowed did not perish with him : his character and the spirit of his work survive to the present day. He was a man to impress the minds of the generation he lived in, and to hand down an example of goodness and probity to the generations which followed him.

There is no need again to recapitulate the disadvantages of his childhood : the terrible trials of his early sickness and the consequent injury to his bodily powers in the vicissitudes of his active career.

He had lived a life of self-improvement. The handicraft of pottery at the beginning of his career was rude and empirical, but he rapidly raised it to the condition of an art. He introduced the turning-lathe, and the form of the articles produced by him were greatly improved. It was not, however, without the greatest struggle and effort that he achieved his fame. He determined to secure efficiency in his trade. He pulled down kiln after kiln

to correct defects or to make the necessary improvements.

He was constantly inventing new tools and machines to improve the manufacture. He instructed his workmen individually, and himself made the first pattern of any original piece made in his pottery. He spent his evenings chiefly in contriving tools and instruments to effect some novel process or in making chemical experiments. He never lay down to rest without thinking and planning the new work of the morrow.

All these efforts led him to the verge of poverty, like his predecessor, Palissy; but though his poverty and struggle were great, his will and dignity proved greater and stronger. He never ceased to have faith in his future. Not a moment was given to doubt, hesitation, or discouragement. He believed that his assiduity and perseverance could triumph.

Another characteristic of Wedgwood was his keen insight into the characters of men and women. It is not always by what a man does with his own head and hands, but through the persons whom he selects to carry out his instructions, that he achieves success. Wedgwood's workmen began to love and respect their master, because they knew that he had his special insight into their characters. It was for this reason that Wedgwood selected Bent-

ley for his London partner—a gentleman of great intelligence, excellent business habits, and unsullied integrity.

Wedgwood was also helped by his wife. In one of his letters to Bentley he said that he never entered on any new plan without first consulting his wife. She was indeed his true helpmeet. To quote Wordsworth's line, she was the perfect wife :

“ The reason firm, the temperate will,
Endurance, foresight, strength and skill ;
A perfect woman, nobly planned,
To warn, to comfort, and command ;
And yet a spirit still, and bright,
With something of angelic light.”

Wedgwood was never satisfied with permitting things to remain as they were. He must have constant improvements. In his early years England was mainly supplied with its best earthenware from abroad—from Holland, France, and Germany. Why should not England, with its teeming population, manufacture earthenware for itself? The clay and other materials were as good here as elsewhere. These only wanted the master manufacturers to give an impulse to the home trade. Wedgwood was the leading man to give that impulse, and by his indomitable perseverance to open a road in which other manufacturers followed him, and thus the production of Staffordshire pottery and

the employment of Staffordshire people were prodigiously increased.

Wedgwood was not satisfied with the manufacture of ordinary pottery. His desire was to add beauty to utility, and to render his works artistic as well as suitable for domestic use. It was not enough for him to supply the market with increasing orders for queen's ware, he also desired to add to his reputation by connecting his manufacture with art, and increasing the taste of the people who every day used, while contemplating, his useful ware.

In the eloquent address delivered by the Right Honorable W. E. Gladstone, on the laying of the foundation stone of the Wedgwood Institute at Burslem, on the 26th October, 1863, many pregnant remarks were made on the association of Beauty and Utility, because (as the Chancellor of the Exchequer remarked) "it is in this department, I conceive, that we are to look for the peculiar pre-eminence, I will not scruple to say the peculiar greatness, of Wedgwood. . . The pursuit of the element of Beauty in the business of production will be found to act with a genial, chastening, and refining influence on the commercial spirit; that, up to a certain point, it is in the nature of a preservation against some of the moral dangers that beset trading and manufacturing enterprise; and that we are justified in regarding it not merely as an economical benefit, not merely as that which con-

tributes to our works an element of value, not merely as that which supplies a particular faculty of human nature with its proper food, but as a liberalizing and civilizing power, and an instrument in its own sphere of moral and social improvement."

And again, in the same address on the achievements of Wedgwood, Mr. Gladstone said: "His most original and characteristic merit lay, as I have said, in the firmness and fulness with which he perceived the true law of what we may call industrial art, or, in other words, of the application of the higher art to industry; the law which teaches us to aim first at giving to every object the greatest possible degree of fitness and convenience for its purpose, and next of making it the vehicle of the highest degree of beauty which, compatibly with that fitness and convenience, it will bear; which does not, I need hardly say, substitute the secondary for the primary end, but which recognizes, as part of the business of production, the studies to harmonize the two. To have a strong grasp of this principle, and to work it out to its results in the details of a vast and varied manufacture, is a praise high enough for any man, at any time, and in any place. But it was higher and more peculiar, as I think, in the case of Wedgwood than in almost any other case it could be. For that truth of art, which he saw so clearly, and which lies at the root of excellence, was one of

which England, his country, has not usually had a perception at all corresponding in strength and fulness with her other rare endowments. She has long taken a lead among the nations of Europe for the cheapness of her manufactures ; not so for their beauty. And if the day shall ever come when she shall be as eminent in true taste as she now is in economy of production, my belief is that that result will probably be due to no other single man in so great a degree as to Wedgwood."

There are some critics who aver that the manufacturers of modern Staffordshire pottery turn out better plaques and better vases than Wedgwood ever made. No wonder ! Wedgwood turned out his best works about a hundred years ago. It would be strange if, in the course of the century which succeeded his death, the Staffordshire potters had not made many excellent improvements in the manufacture of earthenware and porcelain. But no doubt can be entertained that he was the precursor of all that has since been accomplished. He was the man who, by laborious efforts extending over many years, introduced Greek and Etruscan art into the British potteries. He completely revolutionized the character of the fabrics made in England up to the period of his decease. Though his productions recall Greek art, they are not mere reproductions. He did not revive classical forms in a servile spirit ; his style is

strikingly original. And because other manufacturers may have excelled him, through the course of years, in the excellence of his works, shall we deprive him of the honor of being the pioneer and founder of the artistic productions of Burslem and Etruria?

It was truthfully recorded on his tombstone that he "converted a rude and inconsiderable manufacture into an elegant art and an important part of national commerce." When Wedgwood was born at Burslem, there were about fifty potters, of whom several were Wedgwoods, but the wares they made were all of a rude description. Hanley, now of considerable importance, had then seven small potters. The village had only one horse and one mule. There were neither cart nor carriage of any description in the place. The coals were carried on men's or women's backs. There were only two houses at Stoke,—Ward's and Poulson's,—but no potteries. NB

When Wedgwood had fairly established himself, and obtained a large increase of trade, he was of course imitated by other manufacturers, and this led to a still larger increase. The total annual amount of the whole manufacture of earthenware in the Staffordshire potteries in 1725 was under £15,000 in value; whereas in 1777, about fifty years later, it had increased more than fivefold. In 1785 there were 200 master manufacturers and from 15,000 to NB

20,000 persons employed in earning bread by their daily work. Of course at the same time there was a large proportionate increase in the population of the potteries generally.*

Wedgwood was a large- and public-spirited man. Besides attending to the building up of his own special trade, he did all that he could to open up the district to the trade of the world. He exerted himself to make turnpikes and highways through Staffordshire; and when the Grand Trunk Canal was projected, he devoted himself, heart and soul, to its success. He also developed to the utmost extent the commerce of the district, and took the lead, with the cordial approval of his neighbors, in all measures for the spread of the productions of Staffordshire.

He made a fortune, but he used his wealth nobly. He supported all measures connected with the education of the people. As early as 1760, when he was in comparatively straitened means, he strongly supported the proposal to found a school in Burslem, and subscribed ten pounds for its erection. He induced his eldest brother, Thomas, of the Overhouse, and his distant cousin, Burslem Wedgwood, to do the same. The school was erected on the piece of ground on which the Maypole formerly stood. It was

* According to the census of 1871 Hanley contained 40,000 inhabitants. The population of the Staffordshire potteries then numbered 166,625.

afterward pulled down, and the town-hall of Burslem was erected on the site. Another more complete school was substituted for the former.

To his own workmen he was the kindest friend. A free library and sick fund were instituted at the works for the benefit of all. He subscribed liberally for every good work that wanted support: for Clarkson and the abolition of the slave-trade, for the help of the Polish patriots, for the relief of the British residents in America, for the support of the emigrant French clergy residing in this country, and for most philanthropic and benevolent societies.

We have already referred to his annuities to Leslie (afterward professor) for his assistance in the education of his sons, and to the delicate manner in which he, in conjunction with Boulton of Birmingham, assisted the great Dr. Priestley in the prosecution of his chemical experiments. But he assisted all who needed help, artists as well as others.

“I never knew an instance of a man,” said Dr. Darwin, “raising himself to such opulence and distinction who excited so little envy; and this in a great measure arose from his prudent and modest acquisition of riches, and also from the circumstance that he was free from the failing which frequently attends easily acquired riches, of neglecting his poor relations. He kindly attended to

his, and was of essential service to many of them."

A man may be known to a certain extent by his chosen friends, and Wedgwood's were, for the most part, men of distinction. Perhaps his dearest friend was Erasmus Darwin, poet and physician. Darwin knew Wedgwood in all conditions, in his joys and his sorrows. He was a great admirer of Wedgwood's art and supported him in all his projects. He was with Wedgwood at the amputation of his leg and with him on his death-bed. The Darwins and Wedgwoods were very intimately connected. The greatest of the Darwins, the late Charles Darwin, F. R. S., author of the "Origin of Species," married a Miss Wedgwood, and the race of Darwins is not extinct.

Among Wedgwood's other eminent friends were James Watt, inventor of the condensing steam-engine; Matthew Boulton, the Birmingham manufacturer; Sir Joseph Banks, president of the Royal Society; Thomas Day, author of "Sandford and Merton"; Sir William Hamilton; "Athenian" Stuart; Clarkson and Wilberforce; and many artists and sculptors referred to in the previous chapters.

Wedgwood received many honors. He was a Fellow of the Royal Society in consequence of his invention of the pyrometer and his many scientific papers contributed to the society. He was a Fellow of the Antiquarian Society, be-

cause of his knowledge of Greek and Etruscan art, besides being member of a large number of foreign societies.

His influence, his example, and his works at Burslem and Etruria had a wonderful power in improving the moral and intellectual character of the inhabitants of the potteries. We have already referred to the first visit of John Wesley to Burslem, in 1760, when he was pelted with mud. He visited the same place in 1781, after Wedgwood had established his splendid pottery works. Wesley's words were these: "I returned to Burslem. How is the whole face of the country improved in about twenty years! Inhabitants have continuously flowed in from every side. Hence the wilderness is literally become a fruitful field. Houses, villages, towns, have sprung up, and the country is not more improved than the people." After these words of John Wesley further eulogy is unnecessary.

From the time when he first turned the lumbering potter's wheel in the old Churchyard Works at Burslem to the time when he lay on his death-bed in his fine mansion at Etruria Hall Wedgwood's mind had ever been active, ever thinking, ever working, ever seeking out fresh scientific truths, and ever busying himself in benefiting his fellow-men. During his busy life he was always simple, patient, and steadfast. His personal sufferings may, perhaps, have restrained and sweetened his moral nature.

The dowry of suffering pursued him through life. His virulent attack of small-pox, the constant pain in his knee until its amputation, the scorïæ in his eyes which threatened blindness, rendered his life a struggle with physical ills, and amounted to a long dying.

Yet how much he accomplished for the benefit of English art and commerce, as well as for the advantage of his fellow-countrymen, during his comparatively brief career !

He did not fear death ; he regarded it as the complement of life. He had done his work, and death was a release from the pains and sufferings which had so long afflicted his existence.

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