tables, to be called the Rudolphine Tables, after the emperor, who promised to bear all the expense, and liberally reward him. Circumstances, however, prevented the fulfilment of this promise. Kepler's salary was not regularly paid, and besides this, the employment was not exactly to his taste. He was involved in pecuniary difficulties, and even driven to eke out a subsistence by casting people's nativities. His impetuous disposition brought him into frequent collision with Tycho Brahe, his great benefactor. He sighed for his liberty. "Rodolph II.," said he to his friend, "is more of an astrologer than an astronomer. To satisfy him, I am obliged to waste my time in making almanacks for him." This was the way in which he spoke of the calendar which he assisted Tycho Brahe in preparing, and which had the misfortune to be burnt by the nobles of Styria, in 1621, because Kepler had given precedence in it to the nobles of Austria. The prefaces to several works which he issued at this period bear evidence of the pecuniary embarrassment which he experienced. Besides having to contend with the irregularity of payment to which we have already alluded, he had a numerous family to support, and, on the death of Tycho Brahe, undertook the charge of his also. In his perplexity, he applied to the landgrave of Hesse, who kindly rendered him valuable pecuniary and other assistance. In a preface addressed to the emperor, in 1618, he acknowledges the receipt of 4,000 pieces of silver; and it is impossible to read his remarks without a painful impression.

Kepler's great work on "The Motion of Mars," which forms a sort of stepping-stone from Copernicus to Newton, was published in the year 1609. After confuting the prevalent notions upon gravity, he distinctly asserts that the attraction of the moon operates upon the earth, and amid a multitude of errors throws out here and there other happy guesses at truth. The three great principles which Kepler is immortalised for having discovered, and which are well known under the name of "Kepler's Laws," are, that the planets move in elliptical orbits, that they describe equal areas in equal times, and that the squares of their periodic times are proportional to their mean distances from the sun. He did not succeed in establishing the last till twelve years after the other two, and then more by lucky conjecture than sound philosophical deduction. The labour he underwent before he could arrive at the first was immense. Starting with the assumption that the planetary orbits were of an oval form, he was disappointed to find that his calculations failed to demonstrate it. "All my theory, therefore," cried he, "has vanished into smoke." He began his work again; the arithmetical operations in which he engaged filled more than twenty-six pages; he failed every time he renewed the attempt. His vexation at this disappointment nearly drove him mad. No less than sixty-nine times did he renew his efforts; but the seventieth time he obtained the desired result. His joy was now unbounded. He surrounded figures of ellipses with symbolical designs. Ordinary language was insufficient to express all he felt; his enthusiasm could only find full scope in mystical symbols. Another discovery of Kepler's was the proper method according to which the glasses of a telescope should be combined and arranged; but he made no practical application of his theory. To enumerate all his published works would exceed our limits and only weary the reader. It is sufficient to say they were very numerous, some voluminous, and all remarkable. Kepler was the precursor, and in some degree the father, of the seventeenth century—that age which was rendered illustrious by the names of Newton, Descartes, Pascal, and others, who brought about a great reformation in science and general knowledge.

Sir Henry Wotton, the English ambassador, made an attempt, in 1620, to persuade Kepler to visit England, and held out a prospect of relief from the pecuniary embarrassment in which he was then involved; but he could not succeed. After appealing for assistance to various governments, Kepler at length completed the Rudolphine Tables in 1627. He was on the point of publishing a translation of a work of Plutarch, when he was compelled to go to Ratisbon for the arrears of his salary. The fatigue of travelling, together with the annoyance he felt, brought on a fever, of which he died on November 5th, 1630, at the age of fifty-nine. He was buried in the churchyard of St. Peter's at Ratisbon. A brief inscription, which does not now exist, was placed upon his tombstone; and in 1808 a monument was erected to his memory under the auspices of the prince primate, Charles Theodore of Halberg. It is a temple situated in the Botanical Garden, not many yards from the spot where his remains lie. His bust in marble occupies the middle of the building, and stands on a pedestal, the bas-reliefs of which represent the genius of Kepler drawing aside the veil which conceals Urania. The goddess holds a telescope in one hand, and in the other a roll, on which the eclipse of Mars is delineated.

LUBECK AND THE HANSEATIC LEAGUE.

In those middle ages, towards which the heart of young England so passionately yearns, men who would not fight or steal, men who would not live by plunder or pay, found themselves in a very disagreeable position. They were looked on with contempt. Big, blustering barons thought them very fair objects of attack; consequently, those who wished to live honestly, to sell and get again, were compelled to unite together for their own protection. It was true then, as now, that union is strength; and in order that they might not be deprived of the rich goods they brought from Italy for the supply of the north of Europe, the merchants of Hamburg and Lubeck joined in an association—the Hanseatic League—which ultimately became the proud and powerful rival of kings and emperors in arts and arms.

The precise date of the Hanseatic League is uncertain. In 1241 the treaty was formed between Lubeck and Hamburg for clearing the road of pirates and robbers, between the Elbe and the Trave, and the river from Hamburg to its mouth, of the same nuisances; but, before that time, Lubeck had formed an alliance with some of the Baltic towns for the same purposes. It was a standing rule of the Hanseatic League, that no cities should be admitted into the confederacy but such as were either situated on the sea, or on some navigable river adjoining. Another standing rule was, not to admit any cities into their league which did not keep the key of their own gates, and did not exercise civil jurisdiction themselves, though they might in other respects acknowledge some superior lord or prince; this prince, however, was compelled to take an oath to preserve their privileges entire. For a protector, they chose the Grand Master of the Teutonic Knights, who had settled in Bremen, and whose government was, in some respects, similar to their own. In process of time many other cities joined the league: their number at one time was upwards of eighty. They were divided into four classes, the chief of which were—Lubeck, Cologne, Brunswick, and Dantzig; at a latter time especially, Bruges, in Flanders, became one of their most famous towns, from which the south of Europe was supplied with the hemp, flax, timber, &c., of the north. In those days, Dr. Anderson tells us, the direct voyage in one and the same summer, between the Baltic and the Mediterranean seas and back again, being thought hazardous and difficult—the mariner's compass not being yet known—a middle or half-way station or port became very desirable, to which traders of both seas might bring their respective merchandise in summer; viz., the naval stores of the north, and the spices, drugs, fruits, cottons, of the Levant and Spain, and Italy, by the ships of Venice, Florence, Pisa, Geneva, &c., and the wines of France, there to be lodged as a market for the reciprocal supply of the rest of Europe. The trade of the Hanse towns with England commenced in 1266, where they were permitted to have a factory, called the Steelyard, situated somewhere between Thames-street and the river. After three years of war, a peace was concluded between the Hanse towns and Edward IV., from which we may conclude, that the naval strength of the English was

inferior to that of their enemies. The treaty testifies in every part the power and importance of the Hanse towns. They were to remain undisturbed in the possession of all their privileges and immunities. They were to be exempt from the Lord High Admiral's court and jurisdiction, but were to have two judges allowed them by the king for determining disputes in maritime affairs. It was also agreed they were to have Steel-yards at Boston and at Lynn; and a debt owed them by the king it was arranged should be defrayed out of the duties payable on their merchandise till the whole was paid. In the time of Henry VIII. they were on such good terms with the English, that they offered to put the monarch in possession of Denmark, and it appears that Henry actually paid them part of the purchase-money, but prudently declined paying any more till he saw whether they had the power to perform that part of the contract; after this time they speedily grew unpopular. In 1552 there was a great outcry against them, on account of the damage they had done the English nation. The charges against them were—that they defrauded the customs—that they frequently exceeded the bounds of the immunities granted them by the king—that they under sold other merchants — that they had reduced the price of English wool, and exported a great deal more cloth than the English merchants. The less trade is interfered with by government the better it will flourish. The age of the Hanse merchants was one of monopoly and privilege, and they had their share of both; but the privy council listening to the popular clamour declared their privileges void, and parliament laid a heavy duty upon their merchandise. They lingered on in England till 1597, when the Emperor Rudolph having ordered the factories of the English merchant adventurers in Germany to be shut up, Queen Elizabeth retaliated, by ordering the Steel-yard to be closed. The Hanse towns thought that by persuading the emperor to act in that manner they would have compelled the queen to reinstate them in the possession of those privileges of which they had been deprived. If such was their aim, they were singularly unfortunate in the method they adopted for its attainment—they could little have understood the imperious character of our maiden queen.

The Hanse merchants transacted most of the commerce of the middle ages. They were the Goldsmidts and Rothschilds of that day. Kings begged their loans and pawned their crowns and revenues to them. They were equally famous in war. They were undoubted warriors. Two Norwegian kings fled before their hosts. They twice stormed and sacked Copenhagen. In 1348 they deposed Magnus, king of Sweden, and gave his crown to his nephew Albert, duke of Mecklenburg. In 1428 they equipped a fleet of 248 ships; nearly all the commercial towns of Europe gave strength and dignity to the League, with money and men, with intelligence and power; it was in its day of power and pride what Great Britain is now.

On this account an enduring interest attaches to Lubeck, the once far-famed Carthage of the north. You now tread its streets and see decay everywhere around you. Grass now grows where once rushed along the busy tide of ambition and of life. In the north of Germany we know no town more quaint and picturesquely old.

The general route is to go to Lubeck from Hamburg, a distance—if we remember aright—of about sixty miles, through one of the most villanous roads it is possible to conceive—all sand in summer, and impenetrable mud in winter. It ought not to be so, for there is some traffic in Lubeck yet; its port, Travemande, being the port of embarkation for passengers for Stockholm or Cronstadt. In the summer Lubeck looks exceeding well; its Gothic gates, its houses with gable ends, and rich in architectural ornaments, its quiet streets, all fill the stranger with interest and excitement. Decayed and deserted though it be, it has a population of about 30,000. The principal edifices in Lubeck are the Dom, or cathedral church, which was begun in 1750, and is full of curious paintings and works of art; and the Marien Kuche, more remarkable still. Every part of it is hung with pictures in true Dutch style—all hard and plain and matter-of-fact. One remarkable picture is a "Dance of Death," preserved here since 1463, thirty-five years before Holbein, though at one time it was attributed to that master. Behind the high altar is a wonderful astronomical clock, which, by remarkable contrivances we cannot explain here, sends forth every day at noon figures of the seven electors, who march very respectfully before the emperor, make their obeisances, and then march back again. The church is not exclusively devoted to the preservation of antiquities. It contains a good specimen of the modern school of historical painting, in the picture of "Christ entering into Jerusalem," by Overbeck, a native of Lubeck. We may add here that we are indebted to Lubeck for other artists: Sir Godfrey Kneller and Adrian Ostade were born in the same town. The only other building of any interest is the Gothic Rathhaus, standing in the market-place in the centre of the town, where at one time met the deputies from the eighty-one cities which then composed the state. Like everything else in Lubeck, it is a ruin. Grave senators, big with the fate of empires, no longer throng its stairs. The hall in which they met has unfortunately been destroyed, but still the place inspires interest. The merchant of Hamburg would do well to resort to Lubeck, and moralise there. Lubeck for ages was the richest of European cities—had an army of its own of 50,000—had its ships on every sea; now it has dwindled away into a petty provincial town. It is still, however, the supreme court of appeal for the other Hanse towns; it has still a shadow of its former greatness; it is not utterly desolate and forlorn. In Hamburg, where almost every man you meet is a Jew, they tell you that Lubeck has never prospered since they expelled that active and money-getting race. Possibly this may have something to do with the decline and fall of Lubeck; the real reason, however, is rather to be sought in that law of decay which cities and empires, great and glorious though they be, find it impossible to withstand. Sidon, and Tyre, and Carthage, have passed away: Lubeck has done the same. The tide once gone by can never be recalled. Commerce finds fresh developements. It matters little that this be the case so long as man's march is onward, and "Excelsior" is still his aim.

THE WARRIOR'S FAREWELL.

The incident depicted in the subjoined engraving is one of the most affecting that occur in life. Hence it is not surprising that Homer has availed himself of it. Every reader of his immortal Iliad, which tells "the wondrous tale of Troy divine"—whether in the original Greek or in the English version of Chapman, Pope, or Cowper—must have been struck with the singular beauty of that episode in the sixth book, which describes the parting of Hector from his wife Andromache and his little boy Astyanax, just before his fatal encounter with Achilles. He meets with them at the Scæan gate, and a most touching interview takes place; from Pope's version of which we are tempted to quote a few lines:—

"Silent the warrior smiled, and pleased resign'd
To tender passions all his mighty mind:
His beauteous princess cast a mournful look,
Hung on his hand, and then dejected spoke:
Her bosom labour'd with a boding sigh,
And the big tear stood trembling in her eye.
'Too daring prince! Ah, whither dost thou run?
Ah, too forgetful of thy wife and son!
And think'st thou not how wretched we shall be,
A widow I, a helpless orphan he!
For sure such courage length of life denies;
And thou must fall, thy virtue's sacrifice.'"