

had accomplished more than was requisite to obtain the highest reward. It was necessary for him to petition Parliament on the subject. Three reigns had passed: Anne had died; George I. and George II. had reigned and died; and now in the reign of George III. an Act was passed enabling Harrison to obtain the sum of 5,000*l*, immediately as part of the reward. But the Commissioners differed about the tempering of the springs. They required a second trial of the timekeeper. Two more years passed, and Harrison's son again departed with the instrument on board the "Tartar" for Barbadoes on March 28, 1765. He returned in about four months, during which time the instrument enabled the latitude to be ascertained within ten miles, or one-third the required geographical distance.

Harrison memorialized the Board again and again. In the following September they virtually recognized his claims by paying him on account 1,000*l*. In February, 1765, the Board entered a minute on their proceedings that they were "unanimously of opinion that the said (Harrison's) timekeeper has kept its time with sufficient correctness, without losing its longitude in the voyage from Portsmouth to Barbadoes beyond the nearest limit required by the Act of 12th of Queen Anne, but even considerably within the same." They would not give him the necessary certificate, though they were of opinion that he was entitled to be paid the full reward.

Harrison was now becoming old and feeble. He had attained the age of seventy-four. He had spent forty years in working at the Chronometers. He was losing his eyesight and could not afford to wait much longer.

Full little knowest thou, who hast not tried,  
What hell it is in suing long to bide;  
To lose good days that might be better spent;  
To waste long nights in pensive discontent;  
To spend to-day, to be put back to-morrow,  
To feed on hope, to pine with fear and sorrow.

But Harrison had not lost his spirit. On May 30, 1765, he addressed another remonstrance to the Board, containing much stronger language than he had up to this time used. "I cannot help thinking," he said, "but I am extremely ill-used by gentlemen who I might have expected a different treatment from; for if the Act of the 12th of Queen Anne be deficient, why have I so long been encouraged under it, in order to bring my

invention to perfection? And, after the completion, why was my son sent twice to the West Indies? Had it been said to my son, when he received the last instruction, 'There will, in case you succeed, be a new Act on your return, in order to lay you under new restrictions, which were not thought of in the Act of the 12th of Queen Anne'—I say, had this been the case I might have expected some such treatment as I now meet with.

"It must be owned that my case is very hard; but I hope I am the first, and for my country's sake I hope I shall be the last, that suffers by pinning my faith upon an English Act of Parliament. Had I received my just reward—for certainly it may be so called after forty years' close application of the talent which it has pleased God to give me—then my invention would have taken the course which all improvements in this world do; that is, I must have instructed workmen in its principles and execution, which I should have been glad of an opportunity of doing. But how widely this is different from what is now proposed, viz., for me to instruct people that I know nothing of, and such as may know nothing of mechanics; and, if I do not make them understand to their satisfaction, I may then have nothing!

"Hard fate indeed to me, but still harder to the world, which may be deprived of this my invention, which must be the case, except by open and free manner in describing all the principles of it to gentlemen and noblemen who almost at all times have had free recourse to my instruments. And if any of these workmen have been so ingenious as to have got my invention, how far you may please to reward them for their piracy must be left for you to determine; and I must set myself down in old age, and thank God I can be more easy in that I have the conquest, and though I have no reward, than if I had come short of the matter and by some delusion had the reward!"

The Right Honorable the Earl of Egmont was in the chair of the Board of Longitude on the day when this letter was read—June 18, 1765. The Commissioners were somewhat startled by the tone which the inventor had taken. Indeed, they were rather angry. But Mr. Harrison, who was in waiting, was called in. After some rather hot speaking, and after a proposal was made to

Harrison which he said he would decline to accede to "so long as a drop of English blood remained in his body," he left the room. Matters were at length duly arranged. Another Act of Parliament was passed, appointing the payment of the whole reward of 20,000 to the inventor; one moiety upon discovering the principles of the construction of his chronometers and assigning his four chronometers (one of which was styled a watch) to the use of the public, and the remaining moiety on sufficient proof on the correctness of the chronometers.

Mr. Harrison, accordingly made over to the Commissioners of Longitude his various timekeepers, and deposited in their hands correct drawings, so that other skilful makers might construct similar chronometers on the same principles. Harrison expressed the greatest readiness to explain his inventions, and to subject them to every required test. Indeed, there was no difficulty in making the chronometers, after the explanations and drawings which Harrison had published. An exact copy of his last watch was made by the ingenious Mr. Kendal, one of Harrison's apprentices. This chronometer was used by Captain Cook during his three years' circumnavigation of the globe, and was found to answer as well as the original. This, as well as Harrison's chronometer, is still to be seen at the Royal Observatory, and both are in good going condition.

Although Harrison did not obtain the remaining moiety of his reward until 1767, two years after the above-mentioned meeting of the Board, his labors were over, his victory was secured, his prize won. Notwithstanding his delicacy of health he lived a few years longer. He died in 1776, at his house in Red Lion Square, in his eighty-third year. It may be said of John Harrison that by the invention of his chronometer he conferred an incalculable benefit on science and navigation, and established his claim to be regarded as one of the greatest benefactors of mankind.

S. SMILES.

#### ABALONE JEWELRY.

Probably of all the "shell-fish" of the Union, after the oysters, clams, and the scallop, none holds a more important place commercially than the ear-shells, or abalones; and if edible properties are not made the scale of judgment, then