the city of Syracufe, by innumerable machines, in ſuch a manner as rendered it abſolutely impregnable to every me­thod of attack known at that time.

Hiero died about 211 B. C. and was ſucceeded by his grandſon Hieronymus: but he imprudently forſook the counſels of his grandfather, and entered into an alliance with the Carthaginians. Soon after this he was murdered, in consequence of his tyranny and cruelty, and the greateſt dis­orders took place in the city ; which Hannibal, though then in Italy, found means to foment, in hopes of keeping the Syracuſians in his intereſt. This indeed he effected ; but as his own affairs in Italy began to decline, he could not prevent Marcellus from landing in Sicily with a formidable army, which the Sicilians could by no means reſiſt. Syracuſe was soon inveſted ; but the machines invented by Ar­chimedes baffled all attempts to take it by aſſault. It was 22 miles in compaſs, and conſiſted properly of live cities in one, viz. Ortygia, Acradina, Tyche, Neapolis, and Epipolæ. Ortygia was a ſmall iſland very near the continent, and might be called the *citadel of Syracuse,* being joined to Acradina by a bridge. The immenſe preparations which the conſul had made for taking the city by ſtorm, could not have failed to accompliſh his purpoſe, had the place been otherwise defended than by the contrivance of Archimedes. The Roman fleet conſiſted of 60 quinqueremes, beſides a far greater number of other ſhips. The decks were covered with ſoldiers armed with darts, slings, and bows, to drive the beſieged from the ramparts, which on the side of Acradina were waſhed by the ſea, and to facilitate the approach to the walls. But a machine of Marcellus’s own invention was what he chiefly depended on. He had faſtened toge­ther ſidewiſe eight galleys of different lengths, which made but one large body, and were rowed only by the oars of the outermoſt galleys. Theſe eight galleys thus joined, ſerved only as a baſis for a machine, which was raised up higher than the higheſt towers of the walls, and had at the top a platform guarded with parapets in front and on each ſide. This machine was called a s*ambuca,* from its reſemblance to a muſical inſtrument of that name, not unlike an harp. The conſul’s deſign was to bring his sambuca to the foot of the walls of Acradina ; but, while it was at a conſiderable diſtance (and it advanced very slow, being moved only by two ranks of rowers), Archimedes discharged from one of his engines a vaſt ſtone, weighing, according to Plutarch’s account, 1250 pounds, then a second, and immediately af­ter a third ; all which, falling upon the sambuca with a dreadful noiſe, broke its ſupports, and gave the galleys upon which it ſtood ſuch a violent ſhock that they parted, and the machine which Marcellus had raiſed upon them at a vaſt trouble and expence was battered to pieces. At the ſame time, ſeveral other machines, which were not viſible without the walls, and consequently did not lessen the confidence of the Romans in the aſſault, played inceſſantly upon their ſhips, and overwhelmed them with ſhowers of ſtones, rafters, and beams pointed with iron ; inſomuch that Marcellus, being at a loſs what to do, retired with all poſſible haste, and ſent orders to his land-forces to do the ſame ; for the attack on the land-side was attended with no better success,the ranks being broken and thrown into the utmoſt confuſion by the ſtones and darts, which flew with ſuch noiſe, force, and rapidity, that they ſtruck the Romans with ter­ror, and daſhed all to pieces before them.

Marcellus, ſurprised, though not diſcouraged, at this ar­tificial ſtorm, which he did not expect, held a council of war, in which it was reſolved, the next day before ſunrise, to come up cloſe under the wall, and keep there. They were in hopes by this means to secure themselves againſt the terrible ſtorm of ſtones and darts which fell on the ſhips when at a diſtance. But Archimedes had prepared engines which were adapted to all diſtances. When the Romans therefore had brought their ſhips cloſe under the wall, and thought themſelves well covered, they were unexpectedly overwhelmed with a new ſhower of darts and ſtones, which fell perpendicularly on their heads, and obliged them to re­tire with great precipitation. But they were no ſooner got at ſome diſtance, than a new ſhower of darts overtook them, which made a dreadful havock of the men, while ſtones of an immenſe weight, diſcharged from other machines, either diſabled or broke in pieces moſt of their galleys. This loſs they ſuſtained, without being able to revenge it in the least on the enemy. For Archimedes had placed moſt of his en­gines behind the walls, and not only out of the reach, but even out of the fight, of the enemy ; ſo that the Romans were repulſed with a dreadful slaughter, without seeing the hand that occaſioned it ; as if they had been lighting, to uſe Plutarch’s expreſſion, not with men, but with the gods themſelves. What moſt haraſſed the Romans in the attack by ſea, was a sort of crow with iron claws, faſtened to a long chain, which was let down by a kind of lever. The weight of the iron made it fall with great violence, and drove it into the planks oſ the galleys. Then the beſieged, by a great weight of lead at the other end of the lever, weighed *it* down, and conſequently raiſed up the iron of the crow in proportion, and with it the prow of the galley to which it was faſtened, linking the poop at the ſame time into the water. After this the crow letting go its hold all of a ſudden, the prow of the galley fell with ſuch force into the ſea, that the whole vessel was filled with water, and sunk. At other times, the machines, dragging ſhips to the ſhore by hooks, daſhed them to pieces againſt the points of the rocks which projected under the walls. Other veſſels were quite lifted up into the air, there whirled about with incre­dible rapidity, and then let fall into the ſea, and sunk, with all that were in them. How theſe ſtupendous works were effected, few, if any, have hitherto been able to com­prehend.

The troops under the command of Appius ſuffered no leſs in this second attack than the fleet. In the whole space of ground which the army, when formed, took up, the laſt files as well as the firſt were overwhelmed with ſhowers of darts and flints, against which they could not poſſibly defend themſelves. When they had with infinite trouble brought the mantelets and covered galleries, under which they were to work the rams, near the foot of the wall, Ar­chimedes discharged ſuch large beams and ſtones upon them as cruſhed them to pieces. If any brave Roman ventured to draw too near the wall, iron hooks were immediately let down from above, which, taking hold of his clothes or ſome part of his body, lifted him up in the air and daſhed out his brains with the fall. Marcellus, though at a loſs what to do, could not however forbear expreſſing himſelf with pleaſantry : Shall we perſiſt, said he to his workmen, in making war upon this Briareus, upon this giant with an hundred hands? But the ſoldiers were ſo terrified, that if they law upon the walls only a ſmall cord, or the leaſt piece of wood, they immediately turned their backs and fled, crying out, that Archimedes was going to diſcharge ſome dreadful ma­chine upon them.

The consuls, finding themſelves thus defeated in every attempt, turned the ſiege into a blockade, reduced moſt of the other places in the iſland, and defeated the forces which were ſent againſt them ; and at laſt Marcellus made himſelf maſter of Syracuſe itſelf, of which the following account is given by Mr Hooke. “ He took the opportunity of a feſtival, when the ſoldiers and citizens had drunk plentifully, to make a detachment ſcale the walls of Tyche, in that part