in painting, and these, together with a loose texture, are the qualities possessed by Melian earth. 63. The earths of Melos and Samos differ in many more respects. A worker in the Samian pits cannot stand upright while digging, but is forced to lie on his back or side. The vein there stretches a considerable distance and is only about two feet in height, although its depth is much greater. On either side the earth is enclosed by rocks, from which it is extracted. The vein has running through the middle of it a seam, which is superior in quality to the outer parts, and again a second seam like the first, and a third and a fourth, the last, which is known as 'the Star', being the best. 64. The earth is used mainly, if not entirely, for treating cloaks. The same use is made of Tymphaic earth, which is called 'gypsum' by the people of Thessaly and the neighbourhood. Gypsum is most plentiful and most easily discerned in Cyprus, for only a little soil need be removed when it is dug there. In Phoenicia and Syria it is produced by the burning of stones, and again at Thrui, where large quantities are forthcoming. Thirdly there is the gypsum of Tymphaea, Perrhaebia and other places. 65. The nature of the varieties of gypsum is peculiar in that it is stony rather than earthy, the stone being similar to alabastrites, except that it is nodular and so cannot be hewn in large pieces. The viscosity and heat of gypsum, when it is moistened, are remarkable. It is used in building, being poured round the stones themselves, and is also applied to any similar material which requires bonding. 66. The workmen break it up, and then pour water over it and stir it with sticks, for they cannot do so by hand owing to the heat. It is moistened immediately before use, for if it is prepared even a little beforehand, it hardens rapidly and cannot be split up. Its strength too is remarkable, so much so that when the stones of a building break and come apart, the gypsum does not in any way relax its hold upon them. Indeed, often parts of a building have collapsed and have been taken away, while the upper portions remain suspended, being held together by the bonding of the gypsum. 67. Gypsum, moreover, can be removed, and so be rebaked and
used again and again. In Cyprus and Phoenicia it is employed mainly for this purpose, but in Italy for preserving wine as well. Furthermore, it is used by painters for certain features of their art and by fullers for sprinkling on cloaks. In viscosity and smoothness it seems to be unequalled for taking the impressions of seals and this is the purpose for which it is largely, if not mainly, used in Greece. 68. It is in these and similar uses that the effectiveness of gypsum is shown. Its nature is such that it seems in some way to combine the qualities of lime and of earth, namely heat and viscosity; or rather, it possesses each in a superior degree, being hotter than lime and much more viscous than earth. That it contains fire is shown by the fact that on occasion a ship has been laden with cloaks which, becoming soaked, have caught fire, thus causing a conflagration which has destroyed the ship itself as well. 69. Both in Phoenicia and in Syria gypsum is made by being burnt in a furnace. For the most part ‘marble’, and moreover the hardest ‘marble’ available, is burnt, ox-dung being placed by it to make it burn more quickly and thoroughly. For once it has been kindled, ox-dung seems to be extremely hot and lasts for a very long time. When the material has been baked, it is broken up like lime. From these facts it seems clear that gypsum as a whole is generated by fire.