account many dying perſons labour under a ſtertor with their mouths gaping.

SNOW, a well-known meteor, formed by the freez­ing of the vapours in the atmoſphere. It differs from hail and hoar-froſt, in being as it were crystallized, which they are not. This appears on examining a flake of ſnow by a magnifying glaſs; when the whole of it will appear to be compoſed of fine ſhining ſpicula diverging like rays from a centre. As the flakes fall down through the atmoſphere, they are continually joined by more of theſe radiated ſpicula, and thus increaſe in bulk like the drops of rain or hailſtones. Dr Grew, in a diſcourſe of the nature of ſnow, obſerves, that many parts thereof are of a regular figure, for the most part stars of six points, and are as perfect and tranſparent ice as any we ſee on a pond, &c. Upon each of theſe points are other collateral points, ſet at the ſame angles as the main points themſelves : among which there are divers other irregular, which are chief­ly broken points, and fragments of the regular ones. Others alio, by various winds, ſeem to have been thaw­ed and frozen again into irregular clusters ; ſo that it ſeems as if the whole body of ſnow were an infinite maſs of icicles irregularly figured. That is, a cloud of va­pours being gathered into drops, the ſaid drops forth­with deſcend ; upon which deſcent, meeting with a freezing air as they paſs through a colder region, each drop is immediately frozen into an icicle, ſhooting itſelf forth into ſeveral points ; but theſe ſtill continuing their deſcent, and meeting with ſome intermitting gales of warmer air, or in their continual wastage to and fro touching upon each other, ſome oſ them are a little thawed, blunted, and again frozen into cluſters, or in- tangled ſo as to fall down in what we call *flakes.*

The lightneſs of ſnow, although it is firm ice, is ow­ing to the exceſs of its ſurface, in compariſon to the matter contained under it ; as gold itſelf may be ex­tended in ſurface till it will ride upon the leaſt breath of air.

The whiteneſs of ſnow is owing to the ſmall particles into which it is divided ; for ice, when pounded, will become equally white. An artificial ſnow has been made by the following experiment. A tall phial of aquafortis being placed by the fire till it is warm, and filings of pure silver, a few at a time, being put into it; after a briſk ebullition, the ſilver will dissolve ſlowly. The phial being then placed in a cold window, as it cools the ſilver particles will ſhoot into cryſtals, ſeveral of which running together will form a flake of ſnow, which will deſcend to the bottom of the phial. While they are deſcending, they repreſent perfectly a ſhower of ſilver ſnow, and the flakes will lie upon one another at the bottom like real ſnow upon the ground.

According to Signior Beccaria, clouds of ſnow differ in nothing from clouds of rain, but in the circumſtance of cold that freezes them. Both the regular diffusion

of the ſnow, and the regularity of the ſtructure of its parts (particularly ſome figures of ſnow or hail which fall about Turin, and which he calls *roſette),* ſhow that clouds of ſnow are acted upon by ſome uniform cauſe like electricity ; and he endeavours to ſhow how electri­city is capable of forming theſe figures. He was con­firmed in his conjectures by obſerving, that his appara­tus for obſerving the electricity of the atmoſphere never failed to be electrified by ſnow as well as rain. Professor Winthrop ſometimes found his apparatus electri­fied by ſnow when driven about by the wind, though it had not been affected by it when the ſnow itſelf was falling. A more intenſe electricity, according to Bec­caria, unites the particles of hail more cloſely than the more moderate electricity does thoſe of ſnow, in the ſame manner as we see that the drops of rain which fall from thunder-clouds are larger than thoſe which fall from others, though the former deſcend through a leſs ſpace.

But we are not to conſider ſnow merely as a curious and beautiful phenomenon. The Great Diſpenſer of univerſal bounty has ſo ordered it, that it is eminently ſubſervient, as well as all the works of creation, to his benevolent deſigns. Were we to judge from appear­ances only, we might imagine, that ſo far from being uſeful to the earth, the cold humidity of ſnow would be detrimental to vegetation. But the experience of all ages aſſerts the contrary. Snow, particularly in thoſe northern regions where the ground is covered with it for ſeveral months, fructifies the earth, by guarding the corn or other vegetables from the intenſer cold of the air, and eſpecially from the cold piercing winds. It has been a vulgar opinion, very generally received, that ſnow fertilizes the lands on which it falls more than rain, in conſequence of the nitrous ſalts which it is ſuppoſed to acquire by freezing. But it appears from the experi­ments of Margraaf @@(A) in the year 1751, that the che­mical difference between rain and ſnow-water is ex­ceedingly ſmall ; that the latter is ſomewhat leſs ni­trous, and contains a ſomewhat leſs proportion of earth than the former ; but neither of them contain ei­ther earth or any kind of ſalt in any quantity which can be ſenſibly efficacious in promoting vegetation. Al­lowing, therefore, that nitre is a fertilizer of lands, which many are upon good grounds dispoſed utterly to deny, yet ſo very ſmall is the quantity of it contained in ſnow, that it cannot be ſuppoſed to promote the vegetation of plants upon which the ſnow has fallen. The pecu­liar agency of ſnow, as a fertilizer in preference to rain, may admit of a very rational explanation, without re­curring to nitrous ſalts ſuppoſed to be contained in it. It may be rationally aſcribed to its furniſhing a covering to the roots of vegetables, by which they are guarded from the influence of the atmoſpherical cold, and the internal heat of the earth is prevented from eſcaping.

The internal parts of the earth, by ſome principle

@@@(a) Margraaf collected of the pureſt ſnow he could find as much as when melted afforded 100 meaſures of water, each meaſure containing 36 ounces. By diſtilling this quantity he obtained 60 grains, not of *nitre,* but of *calcareous earth,* with ſome grains of the acid of ſea-ſalt, impregnated with a nitrous vapour. The ſame quan­tity of rain-water collected in the winter months with equal attention, when diſtilled yielded 100 grains of cal­careous earth with ſome grains of the acid of nitre and ſea-ſalt. The chemical difference therefore **between rain** and ſnow is very ſmall.