Another evidence that Saturn, as well as the other planets, revolves upon its axis, is drawn from its flat­tened ſhape, like that of Mars, Jupiter, and Saturn. On the 31ftof May 1781, the diſk ſeemed to deviate as much from a true circle as that of Jupiter, though by the interference of the ring this could not be ſo well determined as after an interval of eight years. On the 18th of Auguſt 1787, the difference between the equa­torial and polar diameters was meaſured, the mean of three obſervations of the former being 22". 81, of the latter 20". 61. From theſe obſervations, it appears that the polar diameter of Saturn is to his equatorial diame­ter nearly as 10 to 11; and that his axis is perpendicu­lar to the plane of the ring.

In a ſubſequent paper, the Doctor gives up his reaſoning againſt fixed lucid points in the ring, in conſequence of having frequently obſerved them in ſuch ſituations as could not by any means be accounted for by the ſatellites. He even attempts to invalidate his own arguments above-mentioned concerning the vaſt magni­tude of the mountains neceſſary to make them viſible at this diſtance. “As obſervations (ſays he) careful­ly made ſhould always take the lead of theories, I ſhall not be concerned if ſuch lucid ſpots as I am now going to admit, ſhould ſeem to contradict what has been ſaid in my laſt paper concerning the idea of inequalities or protuberant points. We may, however, remark, that a lucid and apparently protuberant point may exiſt with­out any great inequality in the ring. A vivid light, for inſtance, will ſeem to project greatly beyond the limits of the body on which it is placed. If, therefore, the Luminous places on the ring ſhould be ſuch as proceed from very bright reflecting regions, or, which is more probable, owe their exiſtence to the more fluctuating cauſes of inherent fires acting with great violence, we need not imagine the ring of Saturn to be very uneven or diſtorted, in order to preſent us with ſuch appearan­ces. In this ſenſe of the word, then, we may ſtill oppoſe the idea of protuberant points, ſuch as would de­note immenſe mountains of elevated ſurface.

"On comparing together ſeveral obſervations, a few

trials ſhew that the brighteſt and beſt obſerved ſpot agrees to a revolution of 10h 32' 15". 4; and calculating its diſtance from the centre of Saturn, on a ſuppoſition of its being a ſatellite, we find it 17". 227, which brings it upon the ring. It is therefore certain, that unleſs we ſhould imagine the ring t® be ſuſſiciently fluid to al­low a ſatellite to revolve in it, or ſuppoſe a notch, groove, or diviſion in thc ring, to ſuffer the ſatellite to paſs along, we ought to admit a revolution of the ring itſelf. The denſity of the ring, indeed, may be ſuppoſed to be very inconſiderable by thoſe who ima­gine its light to be rather the effect of ſome ſhining fluid, like an aurora borealis, than a reflection from ſome permanent ſubſtance; but its diſapparition, in ge­neral, and in my teleſcopes its faintneſs, when turned edgewiſe, are in no manner favourable to this idea. —When we add alſo, that this ring caſts a deep ſhadow upon the planet, is very ſharply defined both in its outer and inner edge, and in brightneſs exceeds the planet itſelf, it ſeems to be almoſt proved that its conſiſtence cannot be leſs than the body of Saturn, and that conſequently no degree of fluidity can be admitted ſufficient to permit a revolving body to keep in motion for any length of time. A groove might afford a paſ

ſage, eſpecially as on a former occaſion we have al­ready conſidered the idea of a divided ring. A circum- ſtance alſo which ſeems rather to favour this idea, is, that in ſome obſervations a bright ſpot has been ſeen to project equally on both ſides, as the ſatellites have been obſerved to do when they paſſed the ring. But, on the other hand, we ought to conſider, that the ſpot has often been obſerved very near the end of the arms of Saturn’s ring, and that the calculated diſtance is conſequetltly a little too ſmall for ſuch appearances, and ought to be 19 or 20 ſeconds at leaſt. We ſhould alſo attend to the ſize of the ſpot, which ſeems to be vari­able: for it is hardly to be imagined that a ſatellite, brighter than the ſixth, and which could be ſeen with the moon nearly at full, ſhould ſo often eſcape our no­tice in its frequent revolutions, unleſs it varied much in its apparent brightneſs. To this we muſt add another argument drawn from the number of lucid ſpots, which will not agree with the motion of one ſatellite only; whereas, by admitting a revolution of the ring itſelf in 10h 32' 15". 4, and ſuppoſing all the ſpots to adhere to the ring, and to ſhare in the fame periodical return, pro­vided they laſt long enough to be ſeen many times, we ſhall be able to give an eaſy ſolution of all the remaining phenomena. See Phil. Tranſi 1790, p. 427.

Saturn, in chemiſtry, an appellation given to lead.

Saturn, in heraldry, denotes the black colour in blazoning the arms of ſovereign princes.

Saturn, one of the principal of the Pagan deities, was the the ſon of Coelus and Terra, and the father of Jupiter. He depoſed and caſtrated his father; and obliged his brother Titan to reſign his crown to him, on condition of his bringing up none of his male iſſue, that the ſucceſſion might at length devolve on him. For this purpoſe he devoured all the ſons he had by his wife Rhea or Cybele: but ſhe bringing forth at one time Jupiter and Juno, ſhe preſented the latter to her huſhand, and ſent the boy to be nurſed on mount Ida; when Saturn being informed of her having a ſon, demanded the child; but in his ſtead his wife gave him a ſtone ſwaddled up like an infant, which he inſtantly ſwallowed. Titan finding that Saturn had violated the contract he had made with him, put himſelf at the head of his children, and made war on his brother, and ha­ving made him and Cybele priſoners, confined them in Tartarus; but Jupiter being in the mean time grown up, raiſed an army in Crete, went to his father’s aſſiſt- ance, defeated Titan, and reſtored Saturn to the throne. Some time after, Saturn being told that Jupiter intended to dethrone him, endeavoured to prevent it; but the latter being informed of his intention, depoſed his fa­ther, and threw him into Tartarus. But Saturn eſcaping from thence fled into Italy, where he was kindly received by Janus king of the country, who aſſociated him to the government: whence Italy obtained the name of *Saturnia Tellus;* as alſo that of *Latium,* from *latio,* “to lie hid.” There Saturn, by the wiſdom and mildneſs of his government, is ſaid to have produced the golden age.

Saturn is repreſented as an old man with four wings, armed with a ſcythe; ſometimes he is delineated under the figure of a ſerpent with its tail in its mouth. This is emblematic of the ſeaſons, which roll perpetually in the ſame circle. Sometimes alſo Saturn is painted