

metal on its top to keep in the fire. In a circle on the table which supports the wheel, are fixed twelve small pillars of glass, at about four inches distance, with a thimble on the top of each. On the edge of the wheel is a small leaden bullet, communicating by a wire with the gilding of the *upper* surface of the wheel ; and about six inches from it is another bullet communicating in like manner with the *under* surface. When the wheel is to be charged by the upper surface, a communication must be made from the under surface to the table. When it is well charged it begins to move ; the bullet nearest to a pillar moves towards the thimble on that pillar, and passing by, electrifies it, and then pushes itself from it ; the succeeding bullet, which communicates with the other surface of the glass, more strongly attracts that thimble, on account of its being before electrified by the other bullet ; and thus the wheel increases its motion till it comes to such a height as that the resistance of the air regulates it. It will go half an hour, and make one minute with another twenty turns in a minute, which is six hundred turns in the whole ; the bullet of the upper surface giving in each turn twelve sparks, to the thimbles, which makes seven thousand two hundred sparks ; and the bullet of the under surface receiving as many from the thimbles ; those bullets moving in the time near two thousand five hundred feet.—The thimbles are well fixed, and in so exact a circle, that the bullets may pass within a very small distance of each of them.—If instead of two bullets you put eight, four com-