

municating with the upper surface, and four with the under surface, placed alternately ; which eight, at about six inches distance, completes the circumference, the force and swiftness will be greatly increased, the wheel making fifty turns in a minute ; but then it will not continue moving so long.—These wheels may be applied, perhaps, to the ringing of chimes \*, and moving of light-made orreries.

23. A small wire bent circularly, with a loop at each end ; let one end rest against the under surface of the wheel, and bring the other end near the upper surface, it will give a terrible crack, and the force will be discharged.

24. Every spark in that manner drawn from the surface of the wheel, makes a round hole in the gilding, tearing off a part of it in coming out ; which shews that the fire is not accumulated on the gilding, but is in the glass itself.

25. The gilding being varnished over with turpentine varnish, the varnish, though dry and hard, is burnt by the spark drawn through it, and gives a strong smell and visible smoke. And when the spark is drawn through paper, all round the hole made by it, the paper will be blacked by the smoke, which sometimes penetrates several of the leaves. Part of the gilding torn off, is also found forcibly driven into the hole made in the paper by the stroke.

\* This was afterwards done with success by Mr *Kinnerley*.