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The young man's book of amusement

Halifax, 1848

Pleasing Experiments with Glass Tubes

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two ounces of nitric acid, and three ounces of muriatic acid ; or eight ounces of water, two ounces of muriatic, and one ounce of sulphuric acid. Either of these mixtures is to be poured warm upon a sheet of tinned iron, placed upon a vessel of stone ware ; it is to be poured on in separate portions, till the sheet is completely watered ; it is then to be plunged into water, slightly acidulated, and washed. The operation is completed by drying. By subjecting the iron to different degrees of heat, the variety of the forms is increased ; some parts are granular, others are like architectural ruins ; others grand natural phenomena of wood, and mountain, and cataract ; in fine, there is no shape which the imagination can conceive, that accident may not produce in these exquisite sports of chemical power. The natural result of the crystallization is, to produce a surface of the shade of mother of pearl. The hues of gold, green, blue, &c. are effected by varnishes, laid on in a peculiar manner, and rubbed to the utmost degree of polish by the soft part of the hand.

Pleasing Experiments with Glass Tubes.

A most remarkable phenomenon is produced in glass tubes, placed in certain circumstances. When these are laid before a fire in an horizontal position, having their extremities properly supported, they acquire a rotatory motion round their axis, and also a progressive motion towards the fire, even when their

supports are declining from the fire, so that the tubes will move a little way upwards to the fire. When the progressive motion of the tubes towards the fire is stopped by any obstacle, their rotation still continues. When the tubes are placed in a nearly upright posture, leaning to the right hand, the motion will be from east to west; but if they lean to the left hand, the motion will be from west to east; and the nearer they are placed to the upright posture, the less will the motion be either way. If the tube be placed horizontally on a glass plane, the fragment for instance of coach window glass, instead of moving towards the fire, it will move from it, and about its axis in a contrary direction to what it had done before; nay, it will recede from the fire, and move a little upwards when the plane inclines towards the fire.—These experiments succeed best with tubes about 20 to 22 inches long, which have in each end a pretty strong pin fixed in cork for their axis.

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To detect Adulteration in Champagne.

This celebrated wine is indebted for its characteristic properties to the presence of carbonic acid. It produces rapid intoxication, in consequence of the alcohol, which is suspended in, or combined with this gas, being thus applied in a sudden and very divided state to a larger extent of nervous surface: for the same reason its effects are as transitory as it is sudden. The following simple test invented by Doctor

Hakeman, m
 dilution of
 parts of sulph
 white heat for
 equal quantity
 put into a stron
 for an hour; an
 coated into on
 acetic acid to
 the least possib
 manner; the m
 precipitation of
 accidentally be

Art of A

To prepare th
 are to be used,

4 ounce
 2 ...
 2 ...
 1 1/2 ...
 1/2 ...

Boil the galls
 distilled water,
 cool, then strain
 the salts in a n
 warm water, the
 is frequently fo