

## ELECTRICITY.

**T**HE medicinal operation of electricity may be referred to its stimulating power. It produces forcible contractions in the muscular fibre; excites therefore to action, if duly applied, and, when in excess, immediately exhausts irritability. As a stimulant it possesses the important advantages of being easily brought to act locally, and of being limited to the part to which it is applied, without at all affecting the general system, while it can also be employed in every degree of force.

Electricity is applied medicinally under the form of the stream or continued discharge of the fluid, under that of sparks, and under that of a shock; the first being the most gentle, the second being more active, and the last being much more powerful than either of the others. The electric stream is applied by connecting a metallic wire, or, what is better, a pointed piece of wood by a chain, with the prime conductor of the electric machine, and holding it by an insulated rod one or two inches distant from the part to which it is to be directed, while the machine is worked. An impression is felt similar to that of a current of air, and a very moderate stimulant operation is thus excited, which is better adapted to some particular cases than the more powerful spark or shock. The spark is communicated by applying a metallic knob connected with a rod in communication with the machine, the operator holding the rod by a glass handle, and bringing the knob within the distance of half an inch, an inch, or two

inches from the part to which the spark is intended to be applied; or, what some have considered as a preferable mode, the patient is placed on an insulated stool, holding a chain connected with the prime conductor, and, while the machine is worked, a metallic knob is brought by the operator within a similar distance of the part from which the spark is to be taken; a sensation somewhat pungent is excited, and slight muscular contractions may be produced; these effects being greater or less, according as the spark is more powerful, this being regulated by the distance at which the knob is held, if the machine be sufficiently in action. The shock is given by discharging the Leyden phial, making the part of the body through which it is intended to be transmitted part of the circuit, a chain for example connected with the external surface of the coated jar, being applied to the shoulder, when the shock is to be sent through the arm, and the knob of the rod communicating with the inner surface of the jar being applied to the wrist. The shock is of course stronger as the phial is large, and as it is fully or partially charged; the sensation it excites is unpleasant, and the muscular contractions considerable, if it is of moderate intensity.

At the first introduction of electricity as a remedy, it was very highly celebrated for its efficacy in a number of diseases; its use is now confined to a few. In paralysis it is not unfrequently had recourse to, to excite muscular contraction, and perhaps with some advantage. It is usually applied under the form of sparks, the application of it requiring to be continued daily for a considerable time. Sometimes moderate shocks are also employed; but the propriety of this practice is doubtful. In amenorrhœa, as the stimulant operation can be excited, in some measure, in the vessels which are affected, advantage may be

derived from electricity; and it is occasionally used, both under the form of sparks taken from the pelvis, and that of moderate shocks transmitted through it. Ophthalmia, and some other varieties of inflammation, have been removed by the electric stream; it has also sometimes succeeded in discussing tumours, and relieving pain. The general rule for the medical employment of electricity is to apply it at first under the milder forms, and gradually to raise it, if necessary, to the more powerful, taking care only not to employ it in too high a state of intensity, but in the greater number of cases rather to expect advantage from its continued and moderate use. In the treatment of paralysis, for example, by the application of electricity, the only rational indication is to excite moderate muscular action with the view of increasing the muscular power; to this, sparks of sufficient strength are adequate, and in employing shocks, there is always some risk of exhausting the irritability of the part through which they are transmitted.

#### GALVANISM.

**T**HE peculiar power which is generated when two metals moistened or acted on by certain chemical liquids are in contact, at first named Animal Electricity, since Galvanism, has been applied as a remedy in various morbid affections. Its effects on the animal system are such as warrant this application. Its activity is shewn by its exciting, when applied in sufficient intensity, strong sensations in sensible parts, and contractions in parts endowed with ir-