

more particularly that which passes through blue glass. This, we are told, may be separated by the prism into seven distinct portions, nearly equal in magnitude : the two first are red, the third yellowish green, the fourth green, the fifth blue, the sixth bluish violet, and the seventh violet. This division, it seems, agrees perfectly with that of the light reflected by a plate of air $\frac{1}{16,480}$ th part of an inch in thickness : and hence we may infer the extreme minuteness of the particles of light.

The sixth and last section describes an experiment on certain dark rays, which were first noticed by Ritter, and relates to the existence of solar rays accompanying light, but cognizable only by their chemical effects. This fact our author has confirmed by observing the effect of the reflection of these invisible solar rays from a thin plate of air capable of producing the well-known rings of colours. This image he threw on paper dipped in a solution of nitrate of silver, and in less than an hour he distinctly perceived portions of three dark rings, nearly of the same dimensions, but manifestly different from the coloured rings. This seems to coincide with Dr. Herschel's late discovery of rays of invisible heat ; but our author doubts whether we are yet possessed of thermometers of sufficient delicacy to place implicit confidence in the experiments hitherto made on these rays by means of that instrument.

Continuation of an Account of a peculiar Arrangement in the Arteries distributed on the Muscles of slow-moving Animals, &c. In a Letter from Mr. Anthony Carlisle to John Symmons, Esq. F.R.S. Read December 8, 1803. [Phil. Trans. 1804, p. 17.]

Since the communication of his former paper on that subject, the author has collected further illustrations respecting the connexion between the disposition of the blood-vessels and the actions of the muscles. His first observations relate to the spermatic and intercostal arteries, and those of the diaphragm in men ; which, he finds, are distributed in a different manner from those of the ordinary muscles. Compared with the distribution of the coronary arteries, it is found that the latter are much more subdivided or arborescent than any other set, and that accordingly these supply the heart,—a muscle whose actions we know are more rapid than those of any other part of the muscular system.

It is hence inferred, that any impediment to the accustomed course of the blood, flowing through muscles, induces a corresponding diminution in their power of action ; and that wherever we find cylindrical arteries emitting few lateral branches, we may conclude that they appertain to muscles of slow but in general of long-continued motion. Of this, instances are given in the human eye, the swimming-bladder of fishes, the intestinum ileum of the *Cavia Aguti*, and various animals of the amphibious class. The better to illustrate his observations, the author has added figures of the swimming-bladder of the tench, and of the ileum of the *Aguti*.