us more clearly to ascertain the cause of the insensibility that occurs in asphyxia. And as the circulation through the lungs is carried on by a branch from the general system we can thus more accurately determine the influence which the non supply of oxygen to the organs of respiration exerts on the blood in passing through their capillaries—the effect which this may have on the general circulation—or on what principle we are to account for the cessation of the action of the heart.

The heart, in cold blooded animals, as the frog, to which this description more particularly refers, consists of two auricles and a ventricle. The blood on leaving the ventricle passes along the aorta or rather the right and left branches of the aorta, to the carotids and the brain, and the descending aorta on each side, which is a continuation of the right and left branches of the aorta, gives off near its origin a branch to the lungs, along which the blood passes to be arterialised, and on its return to the heart enters the left auricle; whilst the blood that passes along the abdominal aorta is distributed to the viscera and lower extremeties, and on its return to the heart enters the right auricle; on the contraction of the auricles the blood is propelled into the ventricle, where the two currents are intimately mixed, and on the contraction of the ventricle, is distributed in the manner we have described. Hence the circulation through the lungs takes place before it enters the left auricle as in warm blooded animals, but does not interfere with the passage of the blood to the brain. Still asphyxia takes place in this class equally as in the warm blooded; and there can be no doubt that the principle on which it depends is identically the same. And as the process is slower in its operation, we can more accurately observe its successive steps, and determine the nature of the phenomena.

If we take a cold blooded animal, as a frog or turtle &c., and place it in a situation where it is deprived of the supply of atmospheric air to its lungs, as in an inverted glass jar full of water, it appears to suffer little inconvenience at first, but after a time becomes restless and agitated, and still later is reduced to a state of asphyxia, more or less deep. If the weather be warm, as during the highest temperature of summer, it requires in this climate from an hour to an hour and a half to reduce a frog to a state of asphyxia. If confined in a greater quantity of water, as in large glass jars, it requires about two hours. And if surrounded with putty about three-fourth of an hour. But if an impervious coating of collodion be painted over a frog, and entended over the nostrils, preventing the atmospheric air from having access to the lungs, it will be reduced to a state of asphyxia in ten or twelve minutes. In a communication which I received from Dr. Cartwright, of New Orleans, who performed a series of experiments on alligators, whilst investigating this subject, he states, that, "an alligator will live if the weather be cool, three days with his head off, if no other harm be done to him, but with head off or on, he will die by a simple ligature of the trachia, in about the same time that your frogs, in the inverted glass jars full of water died. But if, before applying the ligature to the trachea, the whole body be tightly bound with a bandage like a broken limb, and then the ingress of atmospheric air cut off, death will take place almost as soon as in a warm-blooded animal."