

CHAPTER V.

CIRCULATORY SYSTEM.

THIS is an important system to understand on account of it being the means by which the various parts of the body are fed or nourished. The principal points to consider are the heart, arteries, capillary vessels, veins, and the very important fluid they carry, called the blood. Considering the heart, we find this the main organ of circulation; it weighs about six and one-half pounds in the average horse; it acts as a force pump to force the blood through the vessels already named. It is made of strong muscular tissue, which acts involuntary, and is situated between the lungs, which are divided by what is known as the mediastinum, which is a division between the lungs and is made up of two folds, the heart being between these. The bottom end, or apex, of the heart is downwards and rests just above the breast-bone; the base, or upper part, being directed upwards and to the left side, the left lung having a hollow on its inside for the heart to work in. There is a covering or sack around the heart which helps to protect and support it in its place, attached above to back-bone and below to the bones of the sternum, or breast-bone. This sack is made up of fibrous tissue and is of a whitish appearance; inside it is smooth, and has numerous small glands which secrete an oily substance called serous fluid, which lubricates the outer wall of the heart and the inner wall of the sack so that in action it does not irritate the walls. The cavity in the heart is divided into two parts, the right and left sides; each one of these parts are again divided into an upper cavity called auricle and a lower cavity called ventricle; thus we have the right and left ventricle and right and left auricle. The right auricle communicates with the right ventricle through an opening in the septum, or partition in the right side of the heart. This opening is guarded by a valve to keep the blood from flowing back into the auricle. The left auricle communicates with the left ventricle, same as on the right side. The right side of the heart is sometimes called the venous; this side only deals with the impure blood. The left side is sometimes called arterial side, and only deals with pure blood; this side of the heart is very much stronger and thicker than the right side.