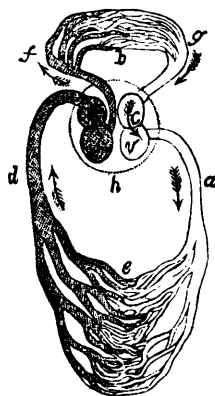


of the heart are similar to those of the muscles of the limbs as regards the parts producing them ; 2. That the arteries become full the moment the ventricles expel the blood they contain ; 3. That the pulmonary artery receives blood at the same instant that the aorta and other arteries do, and therefore that the two ventricles contract and expel the blood at the same time ; 4. That the two auricles contract simultaneously, and that their contraction precedes that of the two ventricles ; 5. That when the flow of an artery is stopped by pressure



the vessel becomes distended with blood between the place where the pressure is applied and the heart, and empty in the other parts, thus showing that the blood comes from the heart into the arteries ; 6. That if pressure be applied in the same manner to a vein it extends in the portions further away from the heart, and disappears in those between it and the place where the pressure is applied ; 7. That the valves—previously discovered—in the veins prevent the blood from flowing in the wrong direction. These and other facts were sufficient to prove his newly advanced theory, which even in his lifetime became almost universally admitted.

The theory will be better understood by those who have not given any attention to this subject, by reference to a

—taken from *Chambers' Encyclo-*  
—the shaded part of the figure

represents structures filled with venous blood, while the unshaded portion represents parts in which pure, arterial blood occurs. The dotted circle represents the heart, and the C, in the shaded portion, the right auricle, the other C the left auricle ; the V, in the shaded portion, the right ventricle and the corresponding V the left ventricle. The cavities C are used for receiving the blood as it flows into the heart, either pure from the arteries or impure from the veins, and for transporting it into the ventricles, the right one of which propels the venous blood to the lungs for purification, and the left by the large artery A, representing the aorta, to feed the system. It passes thence into the capillaries which occur in every part of the system and undergoes changes very much the reverse of these in the capillaries of the lungs, parting with its oxygen and taking up carbonic acid. It then enters the capillaries, which conduct it to the veins, and carrying it to the heart completes the circle, around which it continually flows, constantly giving off its flesh and bone-making properties to build up and strengthen the system. Very minute experiments have been made to determine the time it takes to complete the circuit, with the following result : In man from fifteen to twenty seconds ; the horse, twenty-eight seconds ; the dog, fifteen seconds ; the goat, thirteen seconds ; the fox, twelve and a-half seconds, and the rabbit seven seconds.

Harvey was, during the last two years of James I., royal physician extraordinary to that king, and in 1632 was appointed physician in ordinary to his successor, Charles I., and followed him through good and bad fortune for many years. He attended him on his various expeditions, and was present with him at the battle of Edgehill. Aubrey, writing of the battle, says of Harvey : " During the fight the Prince and Duke of York were committed to his care. He told me that he withdrew