IV. *Postscript to a Paper "On the Ganglia and Nerves of the Heart."*

By Robert Lee, *M.D., F.R.S.*

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SINCE the communication above referred to was presented to the Royal Society, I have made a very minute dissection in alcohol of the whole nervous system of the young heifer's heart. The distribution of the ganglia and nerves over the entire surface of the heart, and the relations of these structures to the blood-vessels and muscular substance, are far more fully displayed in these preparations than in any of my former dissections. On the anterior surface, there are distinctly visible to the naked eye ninety ganglia or ganglionic enlargements on the nerves, which pass obliquely across the arteries and the muscular fibres of the ventricles from their base to the apex. These ganglionic enlargements are observed on the nerves, not only where they are crossing the arteries, but where they are ramifying on the muscular substance without the blood-vessels.

On the posterior surface, the principal branches of the coronary arteries plunge into the muscular substance of the heart near the base, and many nerves with ganglia accompany them throughout the walls to the lining membrane and columnæ carneæ. From the sudden disappearance of the chief branches of the coronary arteries on the posterior surface, the nervous structure distributed over a considerable portion of the left ventricle is completely isolated from the blood-vessels, and on these, numerous ganglionic enlargements are likewise observed, but smaller in size than the chains of ganglia formed over the blood-vessels on the anterior surface of the heart. In the accompanying beautiful drawings, Mr. West has depicted with the greatest accuracy and minuteness the whole nervous structures demonstrable in these preparations on the surface of the heart. But the ganglia and nerves represented in these drawings constitute only a small portion of the nervous system of the heart, numerous ganglia being formed in the walls of the heart which no artist can represent. It can be clearly demonstrated that every artery distributed throughout the walls of the Uterus and Heart, and every muscular fasciculus of these organs, is supplied with nerves upon which ganglia are formed.

Explanation of the Plates.

PLATE III.

Exhibits the trunk and branches of the coronary arteries, and the ganglia and nerves distributed over the anterior surface of the ventricles of the young Heifer's heart; the serous membrane and cardiac fascia having been wholly removed.

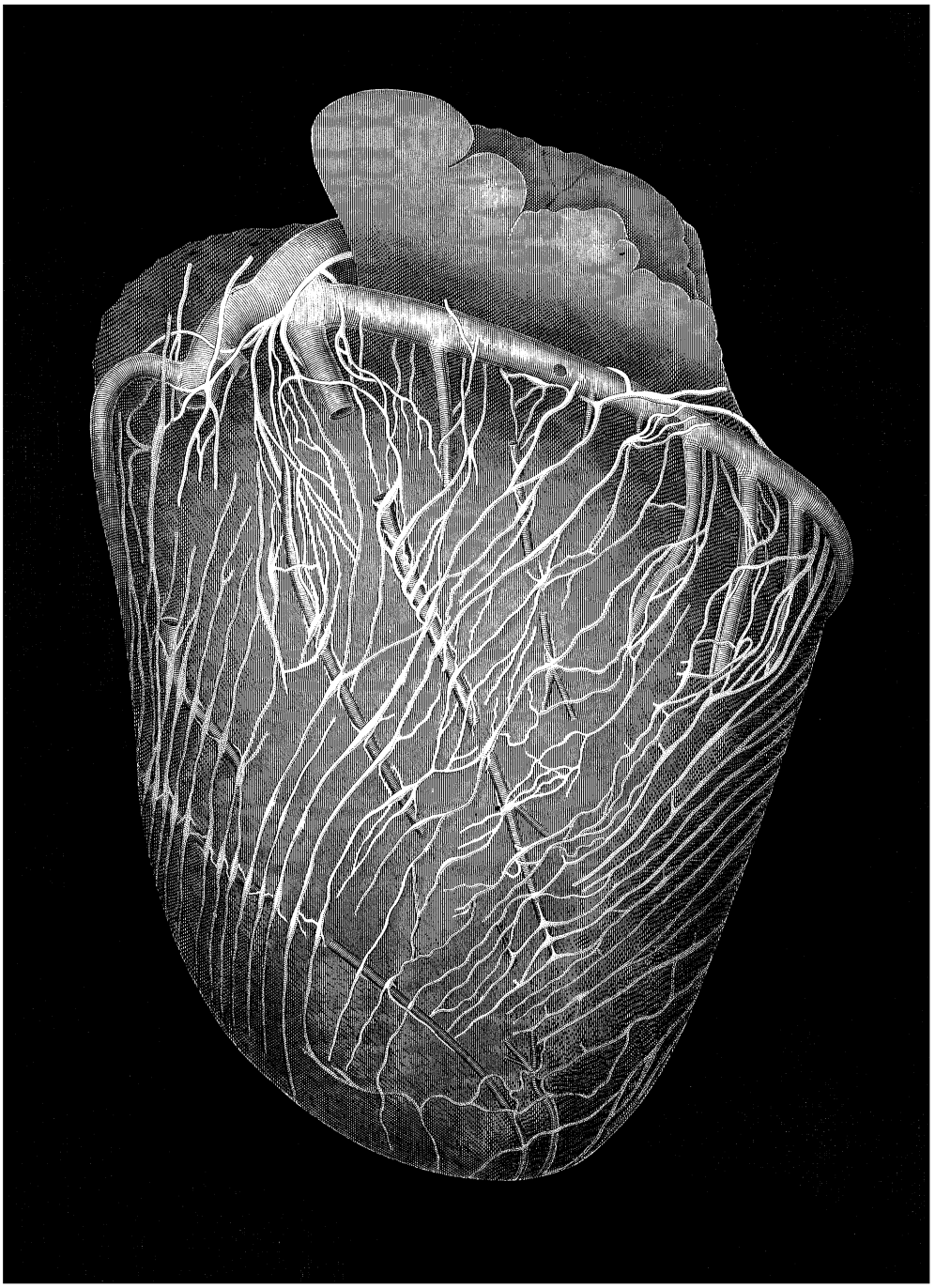
PLATE IV.

Represents the posterior surface of the same heart covered with ganglia and nerves, from the base to the apex.

PLATE V.

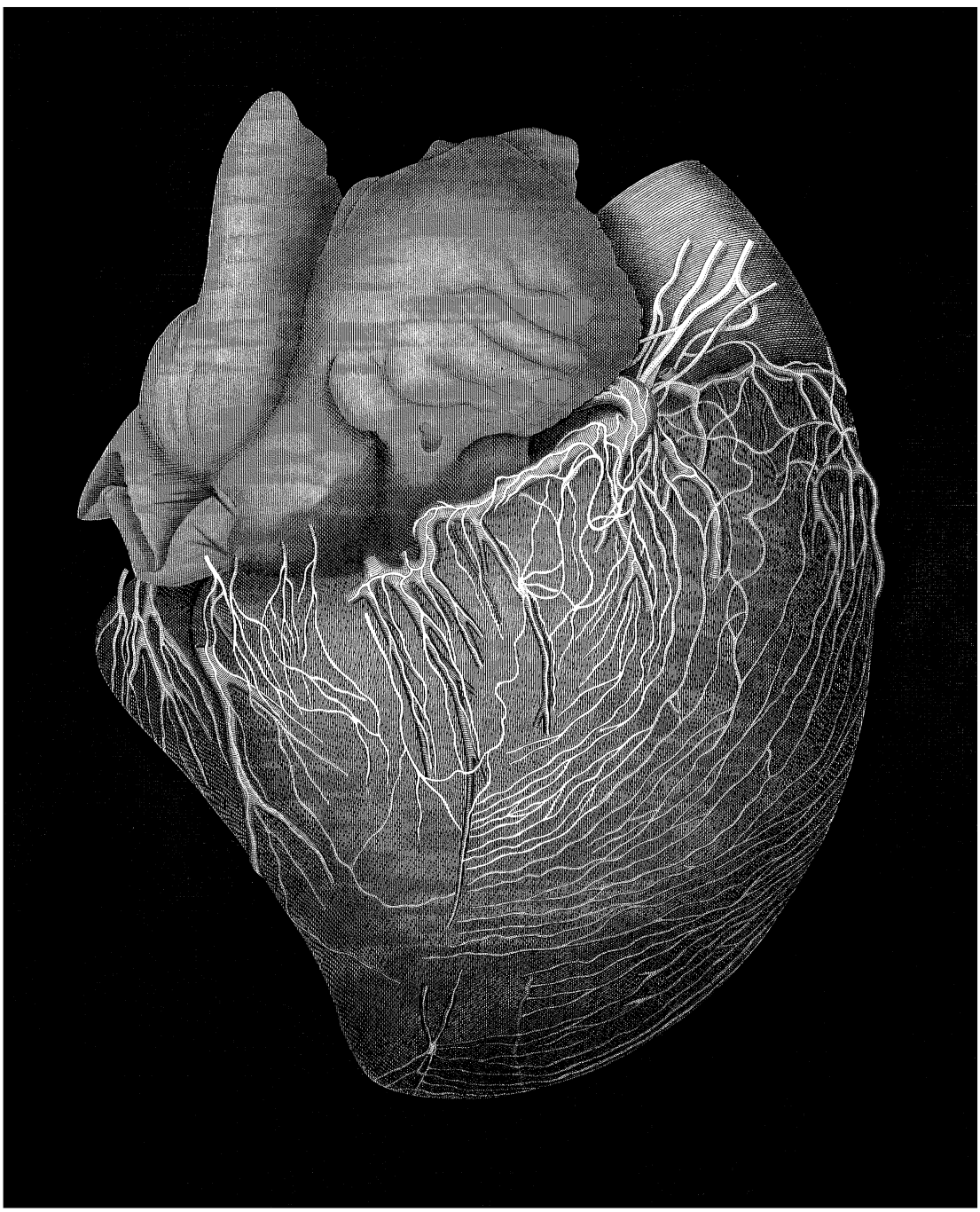
Represents the aorta and the anterior surface of a human heart which was hypertrophied, and weighed four pounds. The trunk and some of the branches of the left coronary artery were ossified. The pulmonary artery has been cut away close to the right ventricle. A portion of the wall of the right ventricle has been removed to expose the cavity and the septum between the ventricles. The serous membrane has been reflected off from the cardiac fascia, a small portion only of which has been left covering the ventricle.

a. The arch of the aorta.
b. The origin of the pulmonary artery, which has been completely removed.
c. The anterior surface of the left ventricle.
d. The anterior surface of the right ventricle.
e. The great ganglionic plexus of nerves into which branches from the par vagum, recurrent and sympathetic nerves of both sides enter, and from which the principal cardiac nerves take their origin.
f. The par vagum of the left side.
g. The trunk of the left coronary artery ossified and completely surrounded with ganglia and nerves, which are distributed over the whole surface of the ventricle to the apex.
h. The serous membrane reflected off from the cardiac fascia, a small portion only of which is left covering the ganglia and nerves near the apex.
i. The cardiac fascia.



F. West, del.

J. Basire sc.



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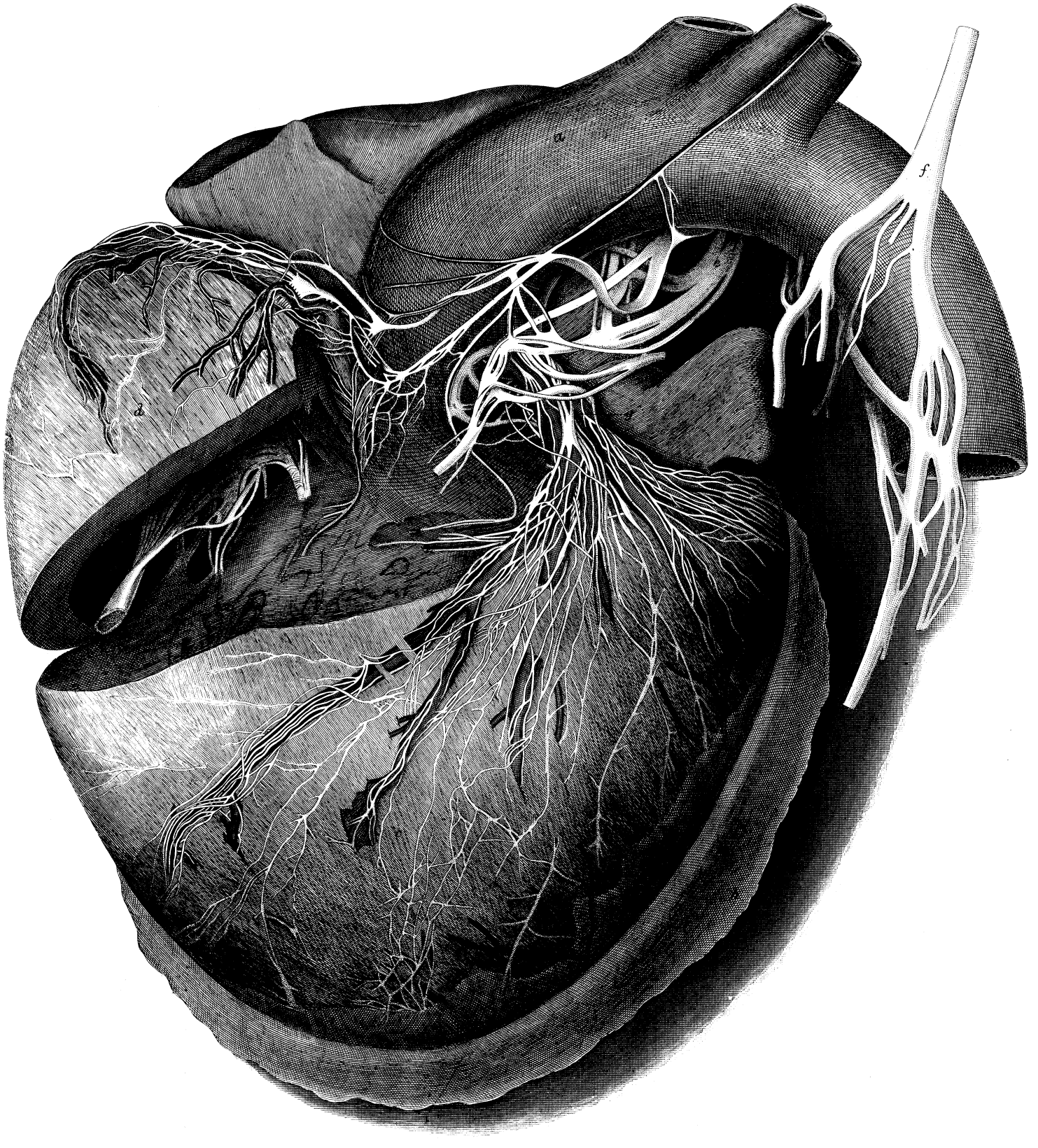

E. West. del.

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