HARVEY AND CESALPINUS.

A HISTORICAL FRAGMENT.

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"Who discovered the circulation of the blood?" is a question to which the majority of well-informed persons would answer, "William Harvey." Nor would the reply of professed physiologists, in this country at least, be different.

Prof. Ceradini, of Genoa, has recently* published an elaborate monograph advocating the prior claims of Cesalpinus, and, after honouring him with a monument in Rome, it is proposed to insert a tablet to his honour on the portals of the University of Pisa, in which he taught for some years before he took up his residence near the Vatican, as physician to Pope Clement VIII.

This plea on behalf of Cesalpinus is only a revival. Moreri,† so early as 1732, urged on his behalf, that "it would be robbing him of a very precious glory not to mention that he had known the history of the circulation of the blood."

A few dates are here essential. Cesalpinus was born at Arezzo in Tuscany in 1519, and died in Rome in 1603, his chief works having been published from 1569 to 1593. William Harvey was born in 1578, went to Padua in 1598, returned to England in 1602, was appointed lecturer on anatomy and surgery to the College of Physicians in 1615, published his "Exercitatio Anatomica de Cordis et Sanguinis Motu" in 1628, and died in 1657. Thus Cesalpinus' work was accomplished before Harvey's had begun.

Cesalpinus knew the pulmonary circulation, as Servetus and Realdus Columbus had done before him, though independently. Cesalpinus first employed the word "circulation," and certainly went far, by experimenting and reasoning, to demonstrate the greater, or systemic, as well as the lesser, or pulmonary, circulation. Considering, as the Italians claim, that their illustrious countryman had proved and knew the whole doctrine, the question remains, Did the world learn it from him? or did the great truth, so far as he was concerned, lay dormant in his folios until exhumed by the learned of succeeding generations?

That Harvey's essay is a model of clear and concise reasoning has never been questioned, and Buckle's‡ claim is incontestably a valid one—that the discovery of the circulation of the blood was first made *perfectly intelligible* by Harvey.

Cesalpinus was a great naturalist, who spent his long life as a student§ Harvey toiled through a busy, restless life, and fought his way, winning renown for himself and his doctrines by energy of resolve and eloquence of pleading. If he was not by his contemporaries reputed to be the author of the doctrine of the circulation, how was it that, after he left Padua, the great theme of discussion was "De Paradoxo Harvejano"? Why did John Rolan, the learned professor of the University of Paris, specially confute him? Why did Leichner in 1646 entitle his essay "De Motu Sanguinis, Exercitatio Anti-Harveiana"? Why did Zacharia Sylvius, in 1648, say, in the preface to his edition of Harvey's work, "*Novam quandam et inauditam de motu cordis et circulatione sanguinis sententiam*"?

It seems to me unanswerable that, by the verdict of his contemporaries and immediate successors, Harvey was the reputed discoverer of the circulation. They—the world—learned the new doctrine from him.

If this be conceded, the question is still open, Did Harvey discover all the doctrine he taught? He gives credit to Galen, to Realdus Columbus, and a few others, but makes no mention of Cesalpinus; but there is no proof that he knew his works. Certain it is that great works were published in Italy at that time, which obtained very little cir-

culatation and remained comparatively unknown—to wit, Ruini's "Anatomia del Cavallo," which contains a most extraordinary sketch of the circulation of the blood. This marvellous passage, so far as I know, never attracted attention until my friend Professor Ercolani, of Bologna, set it forth, with justifiable national pride.

That Harvey was, however, under greater obligation to his predecessors than he had the candour to acknowledge, there is some reason for believing. In the first paragraph of his introduction he says, "As we are about to discuss the motion, action, and use of the heart and arteries, it is imperative on our part to state what has been thought of these things by others in their writings, and what has been held by the vulgar and by tradition, in order that what is true may be confirmed, and what is false set right by dissection, multiplied experience, and accurate observation." In this admirable spirit of intended candour did Harvey begin his work; he concluded it in a very different disposition, if we are to judge from the last paragraph in his dedicatory letter to his very dear friend Dr. Argent, the excellent and accomplished President of the Royal College of Physicians. "I had no purpose to swell this treatise into a large volume by quoting the names and writings of anatomists, or to make a parade of the strength of my memory, the extent of my reading, and the amount of my pains; because I profess both to learn and to teach anatomy, not from books but from dissections; not from the positions of philosophers, but from the fabric of nature; and then because I do not think it right or proper to strive to take from the ancients any honour that is their due, nor yet to dispute with the moderns, and enter into controversy with those who have excelled in anatomy, and been my teachers."

I submit, with much deference, it was not a question of detracting or disputing, but of doing justice. To his president Harvey disavows the study of literature; in his introduction he as clearly tells us that he purposes devoting himself to working up the literature of his subject.

International jealousy apart, it would be most interesting to follow up the steps of the great discovery—one of the most gradual of any of the great discoveries of truth. The present fragment is only put forth as a suggestive contribution, but not without hope that some leisure may allow of its development, if it should be deemed worthy of it.

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SALICIN IN ACUTE RHEUMATISM.

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THE interesting additional report of Dr. Maclagan, in THE LANCET of October 28th, on the Treatment of Acute Rheumatism by Salicin, will probably act as a stimulus to others to test for themselves its efficacy in this as well as in other diseases; and as to Dr. Maclagan is due the credit of first bringing it to the notice of the profession as a valuable remedial agent in rheumatism, it is to him that many will naturally look for guidance in its administration.

What, then, has been the result of his further experience? In a few words it may be said that he has such complete confidence in its efficacy that he has no doubt that salicin or salicylic acid, in large and frequently repeated doses, will ultimately become the only treatment of acute rheumatism. In addition, he prophesies that in the next generation valvular disease by its aid will be much less common than it is at present. Let us hope so; but is it too much to prophesy, from oft-repeated experience, that *even* salicin will by that time have had its day, and have given place to something new? No one, however, who has studied the now accumulated evidence of English and German physicians could well doubt the efficacy of salicin and salicylic acid in reducing temperature and checking the course of rheumatic fever, though probably further investigation will somewhat modify the opinion of the time when Dr. Broadbent was able to state (*vide* THE LANCET of April 8th, 1876) that, "according to the present experience, rheumatic fever, when treated by this drug, is an affair of two or three days."

It becomes, then, a matter of much importance to know

* THE LANCET, Nov. 4th, 1876, p. 663.

† Le Grand Dictionnaire Historique; nouvelle et dernière édition, en 10 vols. Paris, 1732. Art. Cesalpinus. Vol. ii., p. 675.

‡ Miscellaneous and Posthumous Works, vol. ii., p. 203. London, 1872.

§ "La vie du botaniste d'Arezzo s'est écoulée toute entière dans le silence du cabinet." (Nouvelle Biographie Universelle, Paris: Firmin Didot, 1854, Vol. ix., p. 439.)