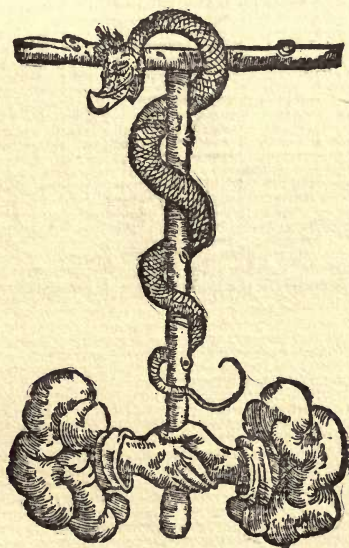


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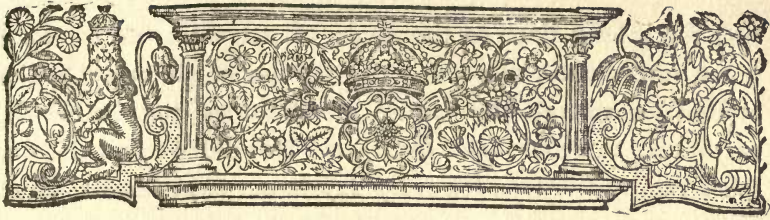
**G V I L I E L M I G I L -
B E R T I C O L C E S T R E N -
S I S , M E D I C I L O N D I -
N E N S I S ,**

**D E M A G N E T E , M A G N E T I -
C I S Q V E C O R P O R I B V S , E T D E M A G -
n o m a g n e t e t e l l u r e ; P h y s i o l o g i a n o u a ,
*plurimis & argumentis , & expe-
rimentis demonstrata.***



L O N D I N I

**EXCVDEBAT PETRVS SHORT ANNO
M D C . .**



AUTHOR'S PREFACE.

TO THE CANDID READER, STUDIOUS OF THE
MAGNETIC PHILOSOPHY.

SINCE in the discovery of secret things and in the investigation of hidden causes, stronger reasons are obtained from sure experiments and demonstrated arguments than from probable conjectures and the opinions of philosophical speculators of the common sort; therefore to the end that the noble substance of that great loadstone, our common mother (the earth), still quite unknown, and also the forces extraordinary and exalted of this globe may the better be understood, we have decided first to begin with the common stony and ferruginous matter, and magnetic bodies, and the parts of the earth that we may handle and may perceive with the senses; then to proceed with plain magnetic experiments, and to penetrate to the inner parts of the earth. For after we had, in order to discover the true substance of the earth, seen and examined very many matters taken out of lofty mountains, or the depths of seas, or deepest caverns, or hidden mines, we gave much atten-

tion for a long time to the study of magnetic forces—wondrous forces they, surpassing the powers of all other bodies around us, though the virtues of all things dug out of the earth were to be brought together. Nor did we find this our labor vain or fruitless, for every day, in our experiments, novel, unheard-of properties came to light: and our Philosophy became so widened, as a result of diligent research, that we have attempted to set forth, according to magnetic principles, the inner constitution of the globe and its genuine substance, and in true demonstrations and in experiments that appeal plainly to the senses, as though we were pointing with the finger, to exhibit to mankind Earth, mother of all.

And even as geometry rises from certain slight and readily understood foundations to the highest and most difficult demonstrations, whereby the ingenious mind ascends above the æther: so does our magnetic doctrine and science in due order first show forth certain facts of less rare occurrence; from these proceed facts of a more extraordinary kind; at length, in a sort of series, are revealed things most secret and privy in the earth, and the causes are recognized of things that, in the ignorance of those of old or through the heedlessness of the moderns, were unnoticed or disregarded. But why should I, in so vast an ocean of books whereby the minds of the studious are bemuddled and vexed; of books of the more stupid sort whereby the common herd and fellows without a spark of talent are made intoxicated, crazy, puffed up; are led to write numerous books and to profess themselves philosophers, physicians, mathematicians, and astrologers, the while ignoring and contemning men of learning: why, I say, should I add aught further to this confused world of writings, or why should I submit this noble and (as comprising many things before unheard of) this new and inadmissible philosophy to the judgment of

men who have taken oath to follow the opinions of others, to the most senseless corrupters of the arts, to lettered clowns, grammaticists, sophists, spouters, and the wrong-headed rabble, to be denounced, torn to tatters and heaped with contumely. To you alone, true philosophers, ingenuous minds, who not only in books but in things themselves look for knowledge, have I dedicated these foundations of magnetic science—a new style of philosophizing. But if any see fit not to agree with the opinions here expressed and not to accept certain of my paradoxes; still let them note the great multitude of experiments and discoveries—these it is chiefly that cause all philosophy to flourish; and we have dug them up and demonstrated them with much pains and sleepless nights and great money expense. Enjoy them you, and, if ye can, employ them for better purposes. I know how hard it is to impart the air of newness to what is old, trimness to what is gone out of fashion; to lighten what is dark; to make that grateful which excites disgust; to win belief for things doubtful; but far more difficult is it to win any standing for or to establish doctrines that are novel, unheard-of, and opposed to everybody's opinions. We care naught, for that, as we have held that philosophy is for the few.

We have set over against our discoveries and experiments larger and smaller asterisks according to their importance and their subtility. Let whosoever would make the same experiments, handle the bodies carefully, skilfully and deftly, not heedlessly and bunglingly; when an experiment fails, let him not in his ignorance condemn our discoveries, for there is naught in these Books that has not been investigated and again and again done and repeated under our eyes. Many things in our reasonings and our hypotheses will perhaps seem hard to accept, being at variance with the general opinion; but I have

no doubt that hereafter they will win authoritativeness from the demonstrations themselves. Hence the more advanced one is in the science of the loadstone, the more trust he has in the hypotheses, and the greater the progress he makes; nor will one reach anything like certitude in the magnetic philosophy, unless all or at all events most of its principles are known to him.

This natural philosophy (*physiologia*) is almost a new thing, unheard-of before; a very few writers have simply published some meagre accounts of certain magnetic forces. Therefore we do not at all quote the ancients and the Greeks as our supporters, for neither can paltry Greek argumentation demonstrate the truth more subtilly nor Greek terms more effectively, nor can both elucidate it better. Our doctrine of the loadstone is contradictory of most of the principles and axioms of the Greeks. Nor have we brought into this work any graces of rhetoric, any verbal ornateness, but have aimed simply at treating knotty questions about which little is known in such a style and in such terms as are needed to make what is said clearly intelligible. Therefore we sometimes employ words new and unheard-of, not (as alchemists are wont to do) in order to veil things with a pedantic terminology and to make them dark and obscure, but in order that hidden things which have no name and that have never come into notice, may be plainly and fully published.

After the magnetic experiments and the account of the homogenic parts of the earth, we proceed to a consideration of the general nature of the whole earth; and here we decided to philosophize freely, as freely, as in the past, the Egyptians, Greeks, and Latins published their dogmas; for very many of their errors have been handed down from author to author till our own time; and as our sciolists still take their stand on

these foundations, they continue to stray about, so to speak, in perpetual darkness. To those men of early times and, as it were, first parents of philosophy, to Aristotle, Theophrastus, Ptolemæus, Hippocrates, Galen, be due honor rendered ever, for from them has knowledge descended to those that have come after them: but our age has discovered and brought to light very many things which they too, were they among the living, would cheerfully adopt. Wherefore we have had no hesitation in setting forth in hypotheses that are provable, the things that we have through a long experience discovered. Farewell.¹

¹ See the rendering of this Preface by Dr. B. W. Richardson and Mr. James Menzies, which appeared in "The Asclepiad" under the title of "The first electrician, William Gilbert, M.D."