IN NUBIBUS.

THE COGITATIONS OF A SMOKING PHILOSOPHER.

BY THE REV. G. J. LOW.

[CONCLUDED.]

PIPE IV.

"I believe in God, maker of Heaven and Earth."

But what is He like? Is He pure Mind, or Mind and Matter combined? If the latter, then He is after all only like one of ourselves, a living being of a "genus" or "order" still higher than that of Man. If so, He is a further development; He would be at the end of the chain instead of at the beginning. Instead of Creator. He would be the ultimate creation: so that won't do. Then is He Mind alone? But how can mind exist without matter? It does seem curious that Thought should be the result of perturbations in the brain,—or that without phosphorus there can be no thought,—or that the brain should secrete thought just as the liver secretes bile,---and yet these are dogmas of science. It seems odd to think that the locomotive or the electric light came into being simply because certain atoms of grey matter were dancing a quadrille within the skull of a Stevenson or an Edison. And yet, on the other hand, it would be quite as absurd to imagine that those inventions would have been made by those men if the said grey matter had been first scooped out of those skulls. In fact, mind and matter, with us mortals at any rate, are so inextricably mixed, that I do not see how we can separate them.¹ But the Maker of the Machine—what of Him? He must not be confounded with His machine: He must be considered, surely, apart from the machine itself. I was watching a locomotive in the station-yard to-day. Really, it was like a thing of life. It ate and drank : it devoured

¹ See the first part of the late G. J. Romanes's work on Monism.

huge quantities of coal and water. It panted, and puffed, and squealed, and roared. The steam was its blood, the cylinders its muscles, the pistons its tendons. It went forward, or backward, or stopped still, or yelled, just as its brain dictated: for the engineer in the cab was its brain. The machine was so perfect, so grand, so life-like. Yet it does not follow that the maker of that machine was composed of boiler-iron, and brass, and coal. It is evident to me that all our knowledge of the constituents of a machine does not help us to form any idea of the constituents, so to speak, of its maker: so in the case of the Universe, it seems to me, we cannot argue from the known to the unknown; we cannot tell what the Maker of the Machine of the Universe is like from any study of the machine itself.

What, then, is the theist's conception of God? The Bible says, "God is a Spirit." What do Christians mean by "Spirit"? Tennyson makes Nature say:

"The Spirit does but mean the breath,"

and the word is used of air, wind, gas, and alcohol. There are those, too, who believe in Spirits or Ghosts of men, certain filmy, shadowy substances, which they can see through, and poke a stick through, and which can at pleasure "materialise," as they call it, and render themselves visible to mortals, and then vanish away. Well, these mysterious beings are very scarce, and I for one find it very hard to believe in them : certainly, I cannot think of such a vaporous existence as being superior to my present one of flesh and blood. And then again, why should these spirits or ghosts have precisely the same shape and appearance as they had when inhabiting bodily forms, and even appear in their mundane habiliments? Cæsar's ghost appears in his toga, the spirit of Hamlet's father in his armour, and so on. Have old clothes their ghosts too? If so, there is no end to the spirits, and tables and chairs would have ghosts, to say nothing of deceased animals. Indeed, ghosts of cats have been seen, if we may credit "reliable authorities." The spiritualists of the day would give us not only the ghosts of our friends, but ghostly flowers, tambourines, guitars, and what not. If animals have spirits, I wonder where they stow away the ghosts of all the defunct rats and mice? Unless, indeed, we accept the doctrines of the ancient philosophers and modern Buddhists, and suppose these ghosts are utilised to animate other bodies. And the trees, too, they must have their "spirits." How odd it would be to imagine the ghost of a pine tree—its Dryad—hovering around a saw-mill, and ruefully watching its own members being remorselessly dragged into it to be cut up,—and vowing vengeance against the owner of the saw-mill as soon as he himself enters the ghostly state ! Why, the fate of Clarence in his dreams (Shakespeare, "Richard III.") would be nothing compared to the fate of that unfortunate lumberman. Now, for my part I cannot believe all this sort of thing: I cannot believe that everything, tables, chairs, musical instruments, and old clothes, have their ghosts.

Now, if God is a spirit, and that table there, or my meerschaum pipe has its spirit too, I don't see what we have gained by our inquiry. It is simply relegating the whole Universe to the shades; and this actual life is far more substantial than the ghostly or shady one. If theists can give us no better idea of God than this, I don't see what good it is. But I should not say theists, but Christians; it is they who describe their deity by this term. After all, what is a Theist? Cannot Mr. Herbert Spencer be included in this term? In his thesis on the probable outcome of religion, entitled "Religion, a Retrospect and a Prospect," he says (at the close): Man "is ever in the presence of an Infinite and Eternal Energy from which all things proceed." There is Mr. Spencer's conclusion of the whole matter. "Ever in the presence"-ah! then, that Energy is Omnipresent-"of an Infinite and Eternal Energy." Just so; and suppose we call this Infinite, Eternal, Omnipresent, Omnipotent Energy by the old-fashioned term-God? It is easier than always using that circumlocution, or Mr. Spencer's other expressions, such as, "The Power that is manifest in the Universe" (First Principles), or "The Power that is manifested throughout Evolution" (Data of Ethics, Chapter IX.). To be sure, Mr. Spencer does not call this Power a "Spirit." I must ask the Rector when I meet him, what is the Christian idea of "spirit." By the way, this definition which Mr. H. Spencer gives us of the Maker of the Machine, i. e., "the Infinite, Eternal Energy from which all things proceed," does not say a word about Who made the Maker of the Machine, the question that Professor Molecule bothered me with. Well, if Mr. Spencer and Professor Molecule—and, for that matter, every other thinker I have met with-must needs postulate something eternal,-surely, so may I. But Mr. Spencer adds, "from which all things proceed." That sounds awfully "scriptural," somehow. Now, Mr. Powell says (see "Pipe I.") that "God in higher sense is Father." So this Infinite, Eternal Energy from which all things proceed may be equivalent to the theist's "God the Father." But then, how about that Everlasting Hydrogen? Is that, then, the mother element? Oh, dear! I am getting things mixed again!

My pipe is just out. I must ask the Rector to-morrow what he means by spirit. In the meantime I think even Mr. H. Spencer cannot find fault with my belief, if I say in company with the Christians:

"I believe in one God the Father, Almighty, Maker of Heaven and Earth and of all things visible and invisible."

PIPE V.

I met the Rector this morning and drew him into conversation. I thought to pose him with the question : "What is spirit?" But it was like my attempt to pose Professor Molecule with the question : "Who made the machine?" I did not get much satisfaction. "You speak of God as a Spirit," I said to the Rector, "will you kindly describe to me what sort of thing 'spirit' is ?"-" My dear sir," he replied, "I have not the least idea." This staggered me somewhat, but I returned to the charge, saying : "Then you use a term, as predicate of your deity, which you don't understand and can't explain?"-" Certainly," said he in a most matter-of-fact way, "I can form no conception whatever of the nature or property of what we term spirit as applied to the Deity or to any immaterial being." I answered him : "Your very expression-"immate-to a Nothing-Something."-" Precisely," said he, "it is a Nothing-Something. It is a Something, because it is a Being, an Entityand yet a Nothing; that is, nothing of which we can form any proper conception; there is nothing of our known substances or phenomena to which we can compare it." I replied : "Then by spirit, as applied to your concept of God, you do not mean anything like air or vapor or gas?"-"Certainly not," said he, "we know perfectly well that air, gas, vapor, and even the luminiferous ether, which it is supposed pervades all space, are matter just as much as wood and stone; and we do not conceive of God as bearing the likeness of anything that is in the heavens above or in the earth beneath."

I asked him: "Is there not danger of confusion of thought is using such an ambiguous word as 'spirit,' which conventionally means one thing and theologically another?"

The Rector replied : "Not only is there danger of it, but I am free to confess there *is* much confusion of thought among divines to-day in regard to these matters; and it is not to be wondered at. Our present theories of heat, light, air, etc., are, you must remember, very modern. The theologians of former times knew no more of the component parts of atmospheric air, or of the doctrine of the correlation of forces, than did the philosophers of those days; and all alike spoke of heat, light, air, etc., as "immaterial" entities. The trouble is, that while physical science has advanced with such strides that, in order to express her new ideas, she has to coin some new term almost every day, said term being generally some barbaric compound of the old Greek words, theology all the while sticks to her old terms: and to those theologians whose scientific knowledge has not kept pace with modern philosophy these old terms undoubtedly connote the old ideas."

"Then," said I, "you Christian theologians have different ideas on these subjects?"

He replied: "Yes; there are as many theologies as there have been philosophies. Indeed we may say there are idealist, empiricist, utilitarian, necessitarian, and even hedonistic theologies. In fact, theology has always been necessarily colored by the dominant philosophy of the day. In these days Evolution is beginning—for it is only just beginning—to dominate popular thought; and in due time theology will follow suit; the advanced guards, so to speak, among the theologians, are doing so now."

"But if the Church," I said, "is such a chameleon-like, protean thing as to change the color and form of her doctrines in conformity with the philosophy of the day, what is the good of it? What can the Church give us which science cannot?"

"My dear sir," said the Rector, "you must not confound the Church with theology: they are two different things. The Church was founded to announce certain objective facts relating to God's dealings with men. If those facts are true, they will be ultimately found to be reconcilable with science. If they are false, then the Church's occupation is gone, and the sooner she disbands the better. But while the Church's business is to deliver her message, the business of theology is to philosophise on that message and adapt it to the knowledge of the day. In doing this she must levy contributions on all the sciences and bring their latest findings to bear on her conclusions. Therefore, like all other sciences, theology is capable of development. But the Church's original message remains one and the same: it was once for all delivered to the saints."

"I confess," said I, "that I do not follow you in all this: for I do not see the difference between what you call the message of

the Church and what I suppose you consider the *rationale* of that message."

"I am not surprised at that," said the Rector, "I could not expect you with your present views, to appreciate the distinction which I draw. We may, possibly, discuss it later on; but in the meantime you have first to decide for yourself whether there is a God or not."

"At all events," said I, parrying his last remark, "You admit the truth of Professor Huxley's dictum, that 'extinguished theologians lie around the cradle of science like the strangled snakes around that of the youthful Hercules."

"Yes," said he, "but extinguished theologians no more lie around that cradle than extinguished scientists and extinguished philosophers. From the dawn of philosophy to our own times, the endeavor of every philosopher has been to 'extinguish' his predecessor, and every new discovery of science has 'extinguished' the pale and ineffectual light that went before."

"That may be," I retorted, "but your Christian theologians proceed to dogmatic definitions and descriptions of your God that seem absurd to us."

The Rector said; "Ah yes; so Mr. Huxley argued in his address to the British Association in Belfast in 1874. In defending himself from the charge of 'fatalism, materialism, and atheism,' he was pleased to say: "Of all the senseless babbles I have ever had occasion to read, the demonstrations of those philosophers who undertake to tell us all about the nature of God would be the worst, if they were not surpassed by the still greater absurdities of the philosophers who try to prove that there is no God.' Now, with regard to this passage, let me say, first, we thank Mr. Huxley for his assurance that those who try to prove that there is no God are the biggest fools of all; it agrees with what our Scriptures tell us: 'The fool hath said in his heart, There is no God.' But, secondly, respecting the 'senseless babble,' of those 'demonstrations' of certain theists, of course I cannot say to whom he alludes; it cannot be Christian theists, for the first axiom of Christian theology is that God is incomprehensible : the very attributes we ascribe to Him all 'transcend the forms of distinct thought,' to adopt Mr. Herbert Spencer's phrase. The Book of Job, the oldest, perhaps, of all the books of the Bible, says (Chap. XI., 7, 8): 'Canst thou by searching find out God? Canst thou find out the Almighty unto perfection? It is as high as heaven; what canst thou do? deeper than hell; what canst thou know?' And the Gospel of St.

John, which is the latest of all the books says: 'No man hath seen God at any time.' Surely he would not call such statements senseless babble?"

I answered: "Certainly not; but probably Mr. Huxley was referring to such 'demonstrations' as are contained in the Athanasian Creed and other formularies. Can you give any rational explanation of them?"

But the Rector evaded the question by saying: "My dear sir, we must leave that discussion, too, for some other time. We must first decide, as I said before, whether there is a God or not, before we discuss whatever may have been predicated of Him."

"That brings me back," said I, "to my first question: why should you say 'God is a spirit?' Granting that the old-fashioned theologians, of whom you speak, stick to the old-fashioned terms, why should the more advanced (amongst whom you would no doubt range yourself) still use a word which men ordinarily connect with Ghosts, vapors, and so forth?"

"Because," said he, "we can't help ourselves. Your own scientific researches have informed you that the Brain or Mind-put it which way you will-cannot create, that all its ideas must be based on impressions already received. Hence we can form no conception of anything we don't know, save by comparing it to something we do know. So when we speak of God, whose nature we cannot possibly comprehend, we must make use of terms-or 'symbols,' as Herbert Spencer says-and of ideas of which we are already cognisant. The word 'spirit' was, no doubt, primarily identical with 'Breath.' It is so, most markedly, in Hebrew and Greek. 'Pneumatology' has a very different sense from 'pneumatics'; yet they are both derived from the same Greek word. And this is easily understood. The breath seemed to the ancients so mysterious an agent, so identified with life, yet so intangible, invisible, that when death occurred, the expressions-'The breath has left the body '- ' the spirit has left the body '- ' life has left the body'-seemed equivalents. Now we all feel there must be a First Cause-or, if you please, a Great Originator. The very idea of Evolution postulates something from which to be evolved. With us The Great Evolver or Originator is God. But as to His nature we can predicate nothing whatever; we have no data to go upon. So we call Him a spirit-not meaning thereby the conventional Ghost-but because that is the nearest approach we can make to that Nothing-Something which scandalises you so much."

So far for my conversation with the Rector. Now sitting at

home over my pipe and recalling his remarks, I notice especially two things. The first is that by "spirit" Christians do not necessarily mean a misty, vague, vaporous form like the "Ghosts" of the Spiritualists, or the "shades" of the classics. They simply use the term to connote an existence of which they can predicate nothing; an existence "transcending the forms of distinct thought," as Herbert Spencer says. In that sense I can accept it too. The Christians' God—and I may say my God—is equal to Mr. Spencer's Infinite, Eternal Energy *plus* self-consciousness or Omniscience. Really this last seems to go without saying. An Eternal, Omnipresent, Creative Energy, possessing every infinite attribute *except* consciousness, is to me unthinkable.

Another thing I was pleased to hear the Rector remark was that the Brain or Mind cannot create; at the most it can but combine impressions already received. Scientific works (such as Bain's Mind and Body, Clifford's Seeing and Thinking, and many others) of course maintain this position, but it was good to hear a theologian And how true it is! Look at the 'creations," so called, admit it. of the poets and artists : what are they but combinations?-startling, pleasing, repulsive, grotesque, as the case may be-look at the idols of the East, or the winged lions and bulls of Assyria, or the sphynxes of Egypt, or the centaurs, satyrs, mermaids of the classics, or the dragons, griffins, etc., what are they but certain jumblings of various parts of creatures already well known? So when the mind tries to conceive of a being of higher order than man, it cannot create an original design. The highest stretch of imagination can only think-for example-of an evil spirit as an ugly man *plus* horns and hoofs and tail—or of a good spirit or angel as a comely man plus a pair of swan's wings. Professor Helmholtz (in his lecture on The Origin of the Planetary System) fancies that organic life will go on evolving on this earth until, ages hence, the denizens of our globe of the then highest order will pick up the bones or mummies of us poor humans, and examine them with pitiful scorn and think what miserable creatures we must have been. Yet he fails to give us any clear idea of what these future highly-developed beings will be like. Possibly the highest type, after all, is man plus wings. Helmholtz, Haeckel, and the rest can show us how man developed from the protozoön; they can infer that this process of evolution will go on ad infinitum, or at least until the world cools down; but they cannot describe the outcome. They might state their ratio thus :

As The Protozoön : Man : : Man :

but they can't work out the sum. At all events this will furnish us with a formula whereby to symbolise the creature of the Coming Race; for we may characterise him as M^2/P , taking M for Man and P for Protozoön.

It is clear there is a limit to human understanding, as to most other things. Here is my pipe, for instance; it holds, say, a cubic half-inch of tobacco. By smoking it I make the tobacco pervade the whole room, perhaps a space ten times as large: still there is a limit. But air—the luminiferous ether—is there no limit to it? The infinite eternal energy—no limit to it? Infinite! eternal!—what a thought! Who can comprehend it?

Well, there is a limit to my smoke, sure enough! My pipe is out.

PIPE VI.

I have been reading lately a good deal about insect life, in the writings of Sir John Lubbock, Grant Allen, and others. Among these I was particularly struck with a charming little essay in a book by W. Mattieu Williams (Science in Short Chapters) entitled, "Another World Down Here." And what a wonderful world, totally unlike our own, must that be in which these small creatures live and move and have their being! It is surely a world within a world, for their sights and sounds are what we see not and hear not. All these minute creatures can see, hear, feel, taste, smell, as well as we; indeed far better, for they have appliances which we lack. They have "antennæ," "ocelli," or "stemmata," which furnish them with some sixth sense, the nature and properties of which we cannot fully appreciate. And yet there is room-so Mr. Williams argues-for such a supernumerary sense, or even for more than one. We can form some notion of the sphere of use for such sense or senses, though to do so, he says, "we must travel beyond the strict limits of scientific induction and enter the fairy land of scientific imagination." This we may safely do, "provided we keep a true course guided by the compass-needle of demonstrable facts." And his theory is this:

Our various organs of sight, hearing, etc., respond to certain molecular vibrations of matter. "The limits of audible tremors (in the case of man's ears) is three to four thousand per second, but the smallest number of tremors that we can perceive as heat is between three and four millions of millions per second." So that "the world of possible sensations lying between" these extreme limits "is of enormous width." "In such a world of intermediate activities the insect probably lives."

So what these little creatures perceive by their senses—be they five or more—constitute "another world down here," as Mr. Williams says, a world within our own world. The objects which they see are invisible to the human naked eye, the sounds they hear are inaudible to us, being caused by vibrations too rapid to affect our auditory apparatus. Indeed we cannot estimate how many sounds there may be unheard by us, because they are either too rapid and shrill or too loud and deep; any more than we can reach the limit of minuteness on the one hand or of space on the other. Possibly there may be no limit to the gamut of sound in nature. The finest and highest note which the human ear can detect is said to be the "Chee Chee" of the mosquito; well, very likely that little aphis on my rose-bush is just now hearing a grand orchestra of sounds inaudible to me, but in which the mosquito's hum would form the inaudible to me, but in which the mosquito's hum would form the diapason. I take my cat on my lap some frosty night and rub her fur the wrong way. I can just faintly see the sparks and hear the crackling sounds; but while I am doing so doubtless the fleas, or whatever parasites there may be on the cat's back, are scared at what they conceive to be an awful thunder-storm : while the great reports that terrify and nearly deafen us don't distress the fleas; such sounds are too big to enter their little ears. Who knows but this earth of ours, rolling through space, produces waves of sound in the luminiferous ether which are altogether too immense for our acoustic faculties? And so of all the planets, and suns to boot. If one could only be transported, for instance, to Alcyone, or whatever star is the centre of our system (for I don't see why I should not enter with Mr. Williams, "the fairy-land of scientific imagination") and have ears adapted to hear that immense orchestra! There is no doubt truth as well as poetry in the expression, "The Music of the Spheres."

So sounds that terrify or nearly deafen us are beyond the reach of these ants, fleas, and midges that surround us; the sounds which we must strain our ears to catch are terrible roars or explosions to them; while they are charmed with fairy music that is altogether too fine for our hearing machines. And so again with sight. Look at that little housefly roaming about the room,—aimlessly, one would think. There, he's getting tired; he settles down on the window-sash and scratches and rubs himself all over. One would think he had nothing to do but just to amuse himself—to kill time. But far from killing time, he is killing things that might kill us, big

creatures as we are. Some French savant, I forget his name, has taken the trouble to investigate one of these house-flies under a powerful microscope. He finds that after one of his airy flights the little fellow comes back to his resting-place with the minute hairs of his body covered with still more minute particles of what we call dust; these he sets to work to scrape off, roll up into a little pellet, and swallow. "Dust," I said: but if I could only borrow for a while the four thousand eyes of that fly I should see that pellet of "dust" is in reality a mass of living organisms-bacilli, bacteria, microbes, spores, germs, and what not-all prejudicial to humanity, but forming luscious food for the fly. The fact is, while roaming around the room he was hunting his prey; and enjoying his sport, no doubt, as keenly as any fisherman on the lake or hunter in the woods. If we could only borrow those multitudinous, microscopic eyes, we should see the whole air peopled with hideous monsters. I wish I could be a fly for a little while, and investigate this world within a world. But perhaps it is better not. I remember as a boy how shocked I was on seeing a drop of water magnified and viewing the hideous creatures within it. I could not, for many a day afterwards, drink any water without making a wry face: and perhaps if some power would give me the gift of seeing the air as that little fly, "with his little eye," sees it, I should forswear drawing a breath. But there the little fellow sits on the window-sash, surrounded with more awful and grotesque forms than ever was the good Saint Anthony: but, unlike him, he does not "keep his eyes so sternly fixed on his old Black Book": rather, like St. George, of Cappadocia, he goes forth to slay the dragons.

And not only are the faculties of these insects so acute, but the intelligence of at least some of them is marvellous. Darwin says (*Descent of Man*) that the brain of an ant, which is proportionately larger than that of any other insect, although itself scarcely as large as the quarter of a small pin's head, "is one of the most marvellous atoms of matter in the world, perhaps more so than the brain of a man." According to Lubbock, Huber, etc., bees, wasps, and ants, in their own little world, seem to have arrived at a stage of absolute perfection, not only organically but sociologically. They form commonwealths which apparently fulfil the ideals of all social reformers, from Plato's *Republic* to Bellamy's *Looking Backward*. They seem to have no discontent, no revolutions or riots, no boycotting, no strikes, no "sweated" workers, no wrecked lives, no "submerged tenth," no filthy slums, in their communities. And yet they have ranks and degrees and divisions of labor: they have rulers, warriors, artisans, nurses, hospitals, crèches, storehouses; and everything runs smoothly in the "state." The Hebrew proverb says: "Go to the ant, thou sluggard." We might add: "Go to the ant, ye Platos and Bellamys." And certainly ants can talk to one another in their own way. I have often watched them as they waived their antennæ at one another, and I am sure, as Mr. Williams suggests, they were making signals which were perfectly intelligible to themselves. Indeed they must have some method of communication to engage in concerted actions as they constantly do.

And they have even the vices of humanity. They can get very drunk on occasion. Dr. Lawson Tait shocked the teetotallers of England not long since by stating this. He said that bees and wasps would crowd round a partially rotten plum or other fruit where alcoholic fermentation had set in, and struggle for the best place; and the more "fortunate" in securing a good spot would suck away until they became very tipsy, and then fall on the ground and lie there till they had slept off their debauch. And I have my own suspicions about the ants also; they, too, like a "drop." I have seen them go for decaying fruit. And then we are told that they have advanced so far in civilisation as to keep "cows," in the persons of the aphides. I have often watched them on the twigs and tendrils of my Virginia creeper, tickling the aphides to make them exude a drop of—milk, shall I say? I believe it is liquor, and that the ant, who may be poetically said to be "quaffing metheg-lin," is, in "the vulgar tongue," literally "taking a nip" from, not his "cow," but his "tapster." I wish some savant would analyse that "wee drap." I am pretty sure, from some rough and crude tests, that what the ant swallows is not a lacteal but an alcoholic extract. If so, it becomes a question how much the alcohol which bees, wasps, and ants consume has helped to stimulate—or develop-their wonderful brain-power.

After all, it would be a grand thing if one could have the power, for a while, to become, like *Alice in Wonderland*, very little or very big at pleasure: if, for instance, one could transform himself into a midge or fly, and view the worlds invisible to us: and then, *per contra*, transport oneself to the centre of our stellar system, and view with eyes proportionate the worlds and suns innumerable, and hear them hum as they roll through space. By the way, perhaps Professor Helmholtz's Coming Race may be able to do something like this. Perhaps M^3/ρ will provide themselves with adjustible eyes and ears: perhaps they will evolve another lens or two and be able to shove their eyes in and out—like snails and make them microscopes or telescopes at pleasure. And so with their ears, may be they will be able to make them megacoustic or micracoustic (why should not I coin terms as well as the savants?) at will. And then this sixth sense, which would make us master further mysteries; why should we not evolve that too, in time? Oh, yes, the Coming Race will have antennæ.

And who knows—for we are still in "the fairy-land of scientific imagination"—but that the denizens of some of the other planets, either of our own sun or of some other stars, have already realised Professor Helmholtz's ideal? The inhabitants of Mars, for instance, have been supposed by some to be signalling to us: perhaps they have been waving their antennæ at us and wondering that we don't respond.

What a lot there must be in the universe to know, if we could only see everything and hear everything, the infinitely minute as well as the infinitely great! Is there an All-seeing Eye, an Allhearing Ear? Aye, surely. The Maker of the Machine must know every sight, every sound in it. That book of the Christians, whether "inspired" or not, contains many a shrewd saying. "He that planted the ear, shall He not hear? Or He that made the eye, shall He not see?" Aye, exactly. He that designed the whole Machine, shall He not know every detail of it, vast as it is? "Whither shall I go then from thy spirit? or whither shall I flee then from thy presence?"