gradual but ever onward flow of glaciers; and the same fact explains to us how snow when it has just fallen and a sleigh or heavy cart passes over it, the portions compressed are converted into ice. When the sleigh or cart presses on the snow the latter is partially melted because the melting point is lowered, but as soon as the pressure is removed, the water just formed is again frozen as ice. This, of course, would not take place if the snow were originally at a temperature considerably below the ordinary freezing point. In the case of water another interesting temperature is its maximum density point, which under the ordinary atmospheric pressure is 4° C. It is this remarkable property of water, of having a maximum density above the freezing point, taken along with the bad thermal conductivity of ice, which explains to us how the bottoms of rivers and lakes are seldom frozen, even after a long winter—a remarkable provision of nature for the preservation of the lives of fishes during winter. Now it has within the current year been proved in Professor Tait's laboratory in Edinburgh University that the maximum density point of water, as I have just said, has been known for over a quarter of a century to be the case with the freezing point, is *lowered by pressure*, and to the extent (so far as I at present remember) of 2° 5 C. for a pressure of 1 ton weight per square inch, or 150 atmospheres. The subject of light supplies us with a fine example of how the greatest geniuses may be made to support a false theory. Sir Isaac Newton was a supporter of the corpuscular or material theory of light. After the complete establishment of the Wave theory, and the brilliant predictions which were made from it, and afterwards verified, to the extent even of producing darkness from light, we might have thought that our knowledge of light would be completed by it. Who amongst the early supporters of the undulatory theory could have imagined that by its own light the sun would tell us of what it is formed? It required a Newton to teach us how to measure the mass of the sun; in the present century we have learned of what that mass is made. Is it not a lesson ennobling, and raising us far above the sordid pleasures of life, which teaches us to look on the great Ruler of the Day and learn what are its motions, to measure as with a rule its distance from us and its size, to weigh as in a balance its mass, and like a chemist in his laboratory even to tell of what it is formed? I wouldn't exchange such knowledge for the wealth, of a millionaire. And, if we take a view of the practical side of science, is it the diggers of gold, or searchers of diamonds, or hunters after wealth that have given us the material comforts of our modern homes, that have taught us in such luxuriance fearlessly to cross the restless ocean, that bring us in such comfort to view the beautiful places of earth, that enable us to look with admiration rather than fear on the less common phenomena of nature, be they comets, eclipses, lightenings or thunder, or have by electric speech brought men so near to one another that they cannot but feel that they are all children of one beneficent Father?

In the science of sound it will suffice to mention the name of the great German Philosopher Helmholtz to remind ourselves that researches of the most important kind have but recently been made in this branch of physics. Amongst the many interesting instruments invented for the better understanding of the nature of sound this side of the Atlantic can claim the phonograph, an instrument which, like the radiometer, if it be not yet of much practical importance, reveals to us points of the greatest theoretical interest.

To give the great modern discov-