

25.
Summary
statement
of Thomson
(Lord
Kelvin).

mechanism, they will have this property of a perfect machine, namely, that it can work backward as well as forward. It is against all reason and common-sense to carry out this idea in its integrity and completeness. "The essence of Joule's discovery is the subjection of physical phenomena to dynamical law. If, then, the motion of every particle of matter in the universe were precisely reversed at any instant, the course of nature would be simply reversed for ever after. The bursting bubble of foam at the foot of a waterfall would reunite and descend into the water; the thermal motions would reconcentrate their energy and throw the mass up the fall in drops, re-forming into a close column of ascending water. Heat which had been generated by the friction of solids and dissipated by conduction and radiation with absorption, would come again to the place of contact and throw the moving body back against the force to which it had previously yielded. Boulders would recover from the mud the materials required to rebuild them into their previous jagged forms, and would become re-united to the mountain-peak from which they had formerly broken away. And also, if the materialistic hypothesis of life were true, living creatures would grow backwards with conscious knowledge of the future, but with no memory of the past, and would become again unborn. But the real phenomena of life infinitely transcend human science; and speculation regarding consequences of their imagined reversal is utterly unprofitable. Far otherwise, however, is it in respect to the reversal of the motions of matter uninfluenced by life, a very elementary consideration of which leads to the full explanation of