which enables States of any extent to enjoy popular government, and allows mixed monarchy to be established, combining freedom with order—a plan pronounced by the statesmen and writers of antiquity to be of hardly possible formation, and wholly impossible continuance. The globe itself, as well as the science of its inhabitants, has been explored according to the law which forbids a sudden and rapid leaping forward, and decrees that each successive step, prepared by the last, shall facilitate the next. Even Columbus followed several successive discoverers on a small scale; and is by some believed to have had, unknown to him, a predecessor in the great exploit by which he pierced the night of ages, and unfolded a new world to the eyes of the old. The arts afford no exception to the general law. Demosthenes had eminent forerunners, Pericles the last. The art of war itself is no exception to the rule. The plan of bringing an overpowering force to bear on a given point had been tried occasionally before Frederick II, reduced it to a system: and the Wellingtons and Napoleons, of our own day, made it the foundation of their strategy, as it had also been previously the mainspring of our naval tactics. So the inventive powers of Watt—preceded as he was by Worcester and Newcomen, but, far more materially by Solomon de Caus and Papin—had been exercised on some admirable contrivances, now forgotten, before he made the step which created the steam-engine anew; not only the parallel motion, possibly a corollary to the proposition on circular motion in the "Principia," but the separate condensation, and, above all, the governor—perhaps the most exquisite of mechanical inventions; and now we have those here present who apply the like principle to the diffusion of knowledge, aware, as they must be, that its expansion has the same happy effect naturally of preventing mischief from its excess which the skill of the great mechanist gave artificially to steam, thus rendering his engine as safe as it is powerful (A burst of applause). The grand difference, then, between one discovery or invention and another is in degree rather than in kind, the degree in which a person, while he outstrips those whom he comes after, also lives, as it were, before his age. Nor can any doubt exist that in this respect Newton stands at the head of all who have extended the bounds of knowledge (Cheers). The most marvellous attribute of Newton's discoveries is that in which they stand out prominent among all the other feats of scientific research, stamped with the peculiarity of his intellectual character. He not only enlarged the actual dominion of knowledge, penetrating to regions never before explored, and taking with a firm hand undisputed possession, but he showed how the bounds of the visible horizon might be yet further extended, and enabled his successors to occupy what he could only descry; as the illustrious discoverer of the New World made the inhabitants of the Old cast their eyes over lands and seas far distant from those he had traversed—lands and seas of which they could form to themselves no conception, any more than they had been able to comprehend the course by which he led them on his grand enterprise. In this achievement, and in the qualities which alone made it possible—inexhaustible fertility of resources, patience unsubdued, close meditation that could suffer no distraction, steady determination to pursue paths, that seemed all but hopeless, and unflinching courage to declare the truths they led to, how far soever removed from ordinary apprehension—in these characteristics of high and original genius we may be permitted to compare the career of those great men. But Columbus did not invent the mariner's compass, as Newton did the instrument which guided his course and enabled him to make, and his successor to extend, his discoveries by closely following his directions in using it Nor did the compass suffice to the great navigator without any observations, though he dared to steer without a chart: while it is certain that, by the philosopher's instrument, his discoveries are extended over the whole system of the universe, determining the masses, the forms, and the motions of all its parts, through the mere inspection of abstract calculations and formulas analytically deduced. New observations have been accumulated with glasses far exceeding any powers possessed by the resources of optics in the days of him to whom the science of optics, as well as dynamics, owes its origin—the theory and the fact have thus been compared and reconciled together in more perfect harmony; but that theory has remained unimproved, and the great principle of gravitation, with most sublime results, now stands in the attitude, and of the dimensions, and with the symmetry which both the law and its application received at once from the mighty hand of its immortal author (Loud applause). But the contemplation of Newton's discoveries raised other feelings than wonder at his matchless genius The light with which it shines is not more dazzling than useful. The difficulties of his course, and his expedients, alike copious and refined, for surmounting them, exercise the faculties of the wise while commanding their admiration; but the results of his investigations, often abstruse, are truths so grand and comprehensive, yet so plain, that they both captivate and instruct the simple. The gratitude, too, which they inspire, and the veneration with which they encircle his name, far from tending to obstruct future improvement only proclaim his disciples the zealous because rational followers of one whose example both encouraged and enabled his successors to make further progress. How unlike the blind devotion to a master which for so many ages of the modern world paralysed the energies of the human mind!

> Had we still paid that homage to a name
> Which only God and nature justly claim,
> The Western Seas had been our utmost bound,
> And poets still might dream the sun was drowned,
> And all the stars that shine in southern skies
> Had been admired by none but savage eyes

Nor let it be imagined that the feelings excited by contemplating the achievements of this great man are in any degree whatever the result of national partiality, and confined to the country which glories in having given him birth. The language which expresses her veneration is equalled, perhaps exceeded, by that in which other nations give utterance to theirs, not merely by the general voice, but by the well-considered and well-informed judgment of the masters of science. Leibnitz, when asked at the Royal table in Berlin his opinion of Newton, said that, "taking mathematics from the beginning of the world to the time when Newton lived, what he had done was much the better half" "The 'Principia' will ever remain a monument of the profound genius which revealed to us the greatest law of the universe" are the words of La Place. "That work stands pre-eminent above all other productions of the human mind." "The discovery of that simple and general law by the greatness and variety of the objects which it embraces confers honour upon the intellect of man." Lagrange, we are told by Delambre, was wont to describe Newton as the greatest genius that ever existed, but to add how fortunate he was also, "because there can only once be found a system of the universe to establish." "Never," says the father of the Institute of France, one filling a huge place among the most eminent of members—"never," says M. Biot, "was the supremacy of intellect so justly established and so fully confessed; in mathematical and in experimental science without an equal, and without an example, combining the genius for both in its highest degree" The "Principia" he terms "the greatest work ever produced by the mind of man" adding, in the words of Halley, that a nearer approach to the Divine nature has not been permitted to mortals. In first giving to the world Newton's "Method of Fluxions," says Fontenelle, "Leibnitz did like Prometheus—he stole fire from heaven to bestow it upon men." "Does Newton," L'Hopital asked, "sleep and wake like other men? I figure him to myself as a celestial genius, entirely disengaged from matter" To so renowned a benefactor to the world, thus exalted to the loftiest place by the common consent of all men—one whose life, without the intermission of an hour, was passed in the search after truths the most important, and at whose hands the human race had only received good, never evil—no memorial has been raised by those nations which erected statues to tyrants and conquerors, the scourges of mankind, whose lives were passed, not in the pursuit of truth, but the practice of falsehood—across whose lips, if truth ever chanced to stray towards some selfish end, it surely failed to obtain belief—who, to slake their insane thirst of power or of pre-eminence, trampled on all the rights and squandered the blood of their fellow-creatures; whose course, like lightning, blasted while it dazzled; and who, reversing the Roman emperor's noble regret, deemed the day lost that saw the sun go down upon their forbearance, no victim deceived, betrayed, or oppressed. That the worshippers of such pestilent genius should consecrate no outward symbol of the admiration they freely confessed to the memory of the most illustrious of men is not matter of wonder; but that his own countrymen, justly proud of having lived in his time, should have left this duty to their successor, after a century and a half of professed veneration and lip homage, may well be deemed strange. The inscription upon the cathedral, the master-piece of his celebrated friend's architecture, may possibly be applied in defence of this neglect:—"If you seek for a monument, look around" If you seek for a monument, lift up your eyes to the heavens, which shew forth his fame. Nor, when we recollect the Greek orator's exclamation, that the whole earth is the monument of illustrious men, can we stop short of declaring that the universe itself is Newton's? Yet, in raising the statue which preserves his likeness, near the place of his birth, and on the spot where his prodigious faculties were unfolded and trained, we at once gratify our honest pride as citizens of the same State, and humbly testify our grateful sense of the Divine goodness which deigned to bestow upon our race one so marvellously gifted to comprehend the works of infinite wisdom, and to make all his study of them the source of religious contemplation, both philosophical and sublime (Enthusiastic applause)."

—We subjoin the following particulars respecting the four comets which are now engaging the attention of astronomers:—

Donati's Comet—Some very fine views have been obtained of the comet since the beginning of October, both telescopic and otherwise: and several remarkable changes have taken place in the appearance of the head and nucleus during this interval. As far as we are aware the comet has not yet been seen during full sunshine; and, although the nucleus has been very bright, the light has hitherto been too little concentrated to be visible when so near the sun. Since October 8 or 9, the comet has been perceptibly waning in lustre: and although it still preserves nearly the same dimensions as formerly, yet its increasing distance from the sun has already commenced to tell on its brightness. From this circumstance, as well as from its approaching nearer to the horizon on each successive evening, we may abandon all hope of its visibility in the daytime, although many less remarkable and less imposing comets have thus been seen. On the night of October 2, a nebulosity was seen in the tail of the comet at the Observatory in Rome, which was duly published in the bulletin of the Paris Observatory, and considered as the probable repetition of the phenomenon of Biela's comet, which occurred in 1845, when, as is well known, that body fell into two portions, which have since remained divorced. It was quickly found, however, that this phenomenon was altogether due to the tail of the comet passing over the splendid cluster of stars, the third in the catalogue of Messier, an object second only to the