

earnest beginning. The movement in Germany thus far has been partially identified with the propaganda of Christian Socialism, which is not to be confounded with the political party led by Bebel and Liebknecht. At a great congress of the Christian Socialists last year a woman gave a public address—for the first time, it is said, in German history on an occasion of this kind—and a similar address was given this year at the Congress at Stuttgart. Friends of the movement have evidently been studying what has been done in this country and in England, and are striving to gain a foothold for the principles whose progress elsewhere they have noticed. Thus far it is only in connection with church matters that women have been given any freedom of public action in Germany, and this has been limited by the oversight of pastors and congregations. For some time there has been a guarded admission of women to university privileges, and the results have been such as to encourage a widening of their sphere of educational activity. There is, of course, nothing like a general approval of the new movement; but it has gained a decided foothold in certain parts of the Empire, and (what is considered an enviable advantage in Germany) it numbers among its friends members of the nobility and official class. There is an increasing desire for the admission of women to share in the management of public hospitals and other charities, to sit on boards of education, to be allowed to work in behalf of released prisoners and of the sick supported by public charity; nor will a too limited discretion or sphere of service be acceptable to the reformers who ask that in the foregoing matters women shall have the same initiative and responsibility as men.

After a little more than three years' absence in the Polar regions, Dr. Nansen returns with a story of the greatest interest. He has achieved a "Highest North" which halves the unexplored distance to the Pole and has brought the foot of man within about 225 miles of that "end and beginning of latitude." It will be remembered that Dr. Nansen believed that an arctic current existed which would carry him in his vessel, the *Fram*, safely packed in the drift ice, northward from the vicinity of the New Siberian Islands through the Polar region and down the southwest coast of Greenland. This theory has not been sustained by the results. Few scientists accepted it, and the story of articles from the *Jeannette* having been carried over this route (which was adduced as conclusive evidence) has been shown to have had no foundation in fact. The drift in the *Fram* was mainly westward, and in the spring of last year Dr. Nansen, with one companion, left the vessel in the ice and pushed forward with a sledge and canoe. He asserts that, had he been better provided with dogs and canoes, he could have easily reached the Pole. As it is, his highest point was 83 degrees 14 minutes—nearly 200 miles beyond Lockwood's "furthest north" in the Greely expedition of 1882. The geographical results of Nansen's expedition include the discovery of several new islands, the tracing of a great extent of unexplored coast, and the finding of very deep soundings hitherto unsuspected. From his journey northward Dr. Nansen returned in the fall of 1895 to the northern coast of Franz Josef Land, where he remained all winter, suffering not a few hardships. In the spring he moved southward, and, unexpectedly and with great joy, came upon the party of Mr. F. G. Jackson, who has been making a thorough exploration of the western coast of Franz Josef Land, but was unable to make his proposed sledge-journey northward this summer on account of the unusual openness of the sea. Dr. Nansen returned to Norway in the *Windward*, which carried relief provisions to

the Jackson party; the latter will stay at least another year in the Far North. The *Fram* was left in charge of Mr. Sverdrup, and Dr. Nansen expresses the confident belief that his second in command will in time bring the crew home, either with or without the vessel. The *Fram* fully justified Dr. Nansen's belief that her peculiar construction would enable her to bear without injury ice-pressure which no ordinary ship could withstand. He claims that the tendency of her drift was much as he had predicted, though the current was greatly influenced by the prevailing winds, and seems to think it possible that the *Fram* may be carried across the Polar regions and to the Greenland coast. Others, however, think it more likely that she will be carried to the east or north coast of Spitzbergen. She has provisions for three years longer. The full story of Dr. Nansen's expedition will be eagerly awaited by all interested in adventure, exploration, and geographical knowledge.

The weather reports from all over the country show that last week and the week preceding were marked by severe suffering and discomfort. Hundreds of deaths were reported as due to the intense heat. Business was affected to such an extent by the prostration of the workingmen as, in some cases, to compel the closing of manufactories. The authorities in New York made every effort to reduce the suffering in the tenement-house districts. General Collis, Commissioner of Public Works, ordered the free baths to be kept open all night. The people stood in line for blocks waiting for the opportunity to enter the baths. The baths were crowded all night. A second act of municipal mercy was the flushing of the East Side streets. This has often been suggested, and the experiment was made several years ago. At that time flushing the streets meant moving an accumulating body of garbage and refuse, which was piled up by the action of the water and the filling of the culverts by this mass, making it impossible for the water to flow through. Flushing the streets then meant a flood at points that overflowed the sidewalks. Thanks to Colonel Waring, this condition no longer exists. The streets, entirely free from garbage or refuse, can be flushed with safety. The flushing cools the air, cleans out the sewers, and leaves the streets in a perfect condition. General Collis issued an order to the employees of his department to go to work at 6 A.M. and stop at 11 A.M., resuming work in the late afternoon. The men and the horses both profited by this order. The public milk stations in the parks were supplied with sterilized milk for the convenience of the mothers who were in the parks at night with their babies. Five thousand dollars was appropriated for ice for the people of the tenements; it was distributed from the police stations. Park Commissioner Woodruff, of Brooklyn, ordered all the public parks kept open for the night, arranging for proper protection by the increasing of the park police force. Hundreds of families made use of the privilege, and fathers and mothers kept watch in turn over sleeping families. The experience of this summer will lead to improved opportunities for bathing and breathing in these two cities, where naturally the mass of the tenement-house people settle in small sections in comparison with their numbers.

The authority conferred upon the Board of Health of New York to demolish all rear tenements that in the judgment of the Board are menaces to the health of the occupants will relieve the city of one of its most prolific sources of death and crime. Two of the Police Commissioners worked earnestly in favor of the law, and the Police Depart-

ment co-operated heartily with the Department of Health in executing its decisions. The owners of some of the buildings the Department ordered destroyed attempted to secure preliminary injunctions, in order to carry the decision to court. The Supreme Court refused to issue injunctions. The decision stated that the Board of Health, under the statute, constituted an authority to pass upon the condition of the property and to determine the sanitary condition of the buildings. Its powers, in the opinion of the Court, are judicial, and are not to be interfered with by the Supreme Court. The powers conferred on the Board by this statute interfere with the rights of property-owners only so far as they protect the larger rights of the community. This decision—the second in favor of the Board—will doubtless end the attempt of the owners of this class of property to seek the aid of the courts to defeat the execution of the law. The work of demolishing the rear tenements goes steadily on, and these pestiferous shelters of degradation, disease, and crime will soon be the past history of tenement-house conditions. The new building laws protect the community from the erection of rear tenements. A certain percentage of the space built upon must be reserved for the purpose of securing light and air to the rooms occupied.



The eclipse of the sun which took place on August 9 was an event of great importance in the astronomical world. Astronomers all over the world have been making preparations to observe the eclipse from the most advantageous points. The observations at Yokohama and Tokio, Japan, were taken under the most favorable conditions. From certain points in Norway the same perfect conditions existed during the total time of the eclipse. From Vadsø the effect of the eclipse was very impressive. The entire landscape suddenly darkened to a deep inky-blue color, with a lemon-colored band of sky all around the horizon. There were brief glimpses of the sun through the rifts in the cloud when it was half eclipsed, and for a few minutes before the period of totality, and again when the shadow was passing off, when the sun appeared shaped like a crescent. Numerous photographs were taken, but they are not of great value. In Berlin the conditions for observing the eclipse were also very favorable. In northern Japan clouds obscured the sun and no observations were possible. Through the liberality of Mr. James, of New York, an expedition headed by Professor D. P. Todd, of Amherst College, was sent to Japan. This party took its observations from Yezo. It is feared that clouds obscured the eclipse from this point, where the Lick Observatory Expedition was also located. There were four points of observation on Nova Zembla and in Siberia. These have not yet been heard from, and it is feared that clouds obscured the sun at these points. A fine view of the eclipse was obtained from the deck of the American Line steamer Ohio, which was at the time off the island of Stot, Norway. Miss Mary Proctor was one of the passengers on the Ohio, and made observations from the deck of the steamer.



With Edison and Tesla at work, and with the claim of a Boston inventor who has just announced the solution of the problem of converting coal directly into an electric current, we are apt to consider the progress of electrical invention as an assured fact partially divested of its former surprises. This progress has been so rapid, and its most wonderful achievements are so recent, that retrospect is on that account all the more instructive and suggestive. A glance into the statistics of the subject shows that the industries in the United States in which electric power trans-

mission is employed represent invested capital amounting to \$1,400,000,000, and two-thirds of these industries have grown up within the past ten years. The Republic has now more than 12,000 miles of electric railroads, including over 90 per cent. of all street railroads in the country, and using 25,000 trolley cars. There are nearly 8,000 isolated electric plants, representing capital amounting to \$200,000,000. We have about 500,000 motors in use, of an aggregate value of \$75,000,000. The complete displacement of steam is regarded as a question of a comparatively short time. Only seventeen years ago a small electric motor for traction was constructed, and it seems like a toy in comparison with the hundred-ton motor now in operation in the belt-line tunnel of the Baltimore and Ohio Railroad at Baltimore. There is also a certainty of greatly increasing the domestic uses to which electricity may be put. Influential workers in the cause of woman's advancement have recently called attention to the hopeful field which is thereby opened, and have urged the claims of electrical science as, in this respect, a direct and valuable aid to their cause. Cooking by electricity, and various other applications of it in doing away with the heretofore necessary drudgery of the household, are looked upon as certain to be introduced in the near future. As yet only tried in isolated instances, though with complete success, the question of expense in these applications of electricity would be solved by the wide demand. Their use in millions of houses would guarantee cheapness, and capital waits to see the use bid fair to become general. So vast are the vistas of discovery revealed that the possibilities should seem quite as great as they did when the first crude efforts of the inventor were crowned with success.



Otto Lilienthal, who met his death near Berlin last week while experimenting with a flying-machine, can with reasonable accuracy be said to have flown like a bird. His success, it is true, was confined to short flights (the longest recorded was a fifth of a mile), and no one but a trained athlete could have used his apparatus. Still, he did sustain himself in the air and make short flights, both with the wind and against it, by the aid of artificial wings and tail, and without motor or balloon aid of any kind. Such experimenters as Professor Langley and Mr. Maxim, who have of late years made the greatest progress toward producing a workable air-motor, admit that they have gained valuable hints from "the man who flies." Lilienthal had been working twenty-seven years over the fascinating problem, and had met accidents and failures innumerable. His guiding principle was that "success in artificial flight is to be expected only from concavo-convex sustaining surfaces." His first successful flight was with a pair of wings made of sheeting, stretched on light willow frames in the shape of a bat's wings, and having eighty-six square feet of surface. He would throw himself out from the steep hill at Rhinow, where he was killed the other day, and from a tower on the hilltop, and would soar out sixty or eighty feet, rising in the air or falling at will. With improved apparatus he gained in the length of his flight and in his power of steering. Of late he had been experimenting with possible motor forces, and had expressed an opinion that the vapor of liquid carbonic acid was the most desirable.



By the death of Professor Hubert A. Newton Yale University loses one of its oldest and most respected instructors, and American science one of its most distinguished representatives. Professor Newton had been in the service of Yale as tutor and professor for over forty-three

years, having entered that service three years after his graduation in 1850. His achievements in the science of pure mathematics were recognized by scholars the world over; he was elected an associate of the Royal Astronomical Society of London in 1872, and a Fellow of the Philosophical Society of Edinburgh in 1886. Perhaps the best known of his scientific labors were his investigations and deductions relating to comets and meteors; he added largely to the knowledge of the laws and principles governing the courses and action of these erratic bodies. Professor Newton was a man of fine personal qualities and of modest and unassuming character. In many ways he aided materially in the development of Yale.



The quinquennial census of France, the returns of which have just been published, has been looked forward to with great interest, in view of the indications of the census in past years that the population was not increasing at any satisfactory rate. The figures now obtained are discouraging. Since April, 1891, the increase of the population, which now stands at 38,228,969, has been only 133,819. Only twenty-four departments show an increase, while sixty-three show a decrease. This small increase is in towns, the decrease in the country. This is a gloomy outlook for a country whose ambition is to be a colonizing power, and whose rivals in that line, especially Great Britain and Germany, have a population increasing at the normal rate.



Sir John Millais

Whatever difference of opinion exists among critics with regard to Sir John Millais's changes of method and of artistic aim, there has never been any doubt about the technical excellence of his work, nor about the strength of his hold on the tastes and sympathy of the world of picture-lovers. John Everett Millais died in London on Wednesday of last week, after a painful illness caused by cancer of the throat—an illness from which he was suffering even when he succeeded Sir Frederick Leighton as President of the Royal Academy. He was born of good family in the Isle of Jersey in 1829, and as a boy showed a strong proclivity toward drawing. Indeed, he may be called precocious in a notable degree, as he was but eleven years old when he entered the Royal Academy, and he soon became a prize-winner; in 1846, when he was only sixteen, he had a painting hung in the Exhibition; in 1847 he won the gold medal of the Academy by a historical painting, and in the years immediately following he exhibited two or three historical canvases which excited no special remark. His impatience at conventional methods and admiration of the idealism of early art led to his joining Holman Hunt, Rossetti, and others in the then much-ridiculed and still often misunderstood Pre-Raphaelite Brotherhood. One of the earliest pictures to illustrate the aim and method of the school was Millais's "Isabella," the subject being taken from Keats's poem. His "Christ in the House of His Parents," "Sir Isumbras," and two or three other paintings, belong to the Pre-Raphaelite period of his career.

That Millais did not continue to follow with Rossetti the path originally chosen was due to a frank perception that his bent was of a different kind; but the influence of his early association with the Pre-Raphaelites was always seen in his later work. The familiar pictures by which his popularity and solid success were attained were those like "The Huguenots," "The Order of Release," "The Proscribed

Royalist," "The Black Brunswicker," "Ophelia," and "The Northwest Passage"—pictures which suggested a story, which were pure and simple in sentiment (keeping always the right side of sentimentality), and which appealed to the universal love of romance. In technique these paintings were beyond reproach. Reproduction in many forms has made them familiar to every one, and of course they now suffer from that familiarity; but the best test of their real merit has been the failure of countless attempts by others to reach the same success by similar methods. That Millais might have attained a higher place among the great artists of the world had he subordinated his desire for popularity and financial success can hardly be doubted, but it would be ungrateful to criticise too closely one who has added so richly to the world's stock of pleasure, and whose methods, if not ideal, were in the main so sound. More than any other one man he is associated with the progress of English art for the last half-century. Personally he was warmly admired, and his selection as President of the Academy was regarded as the best possible. The selection of his successor will not be so easy. Millais, it should be added, was an excellent portrait-painter, and painted, among others, Mr. Gladstone, Mr. Bright, Disraeli, Carlyle, and Newman.



Culture Through Action

It is an interesting fact in the history of human progress that the four men who have been accepted as the greatest writers who have yet appeared used either the epic or the dramatic form. It can hardly have been accidental that Homer and Dante gave their greatest work the epic form, and that Shakespeare and Goethe were in their most fortunate moments dramatists. There must have been some reason in the nature of things for this choice of two literary forms which, differing widely in other respects, have this in common, that they represent life in action. They are very largely objective; they portray events, conditions, and deeds which have passed beyond the stage of thought and have involved the thinker in the actual historical world of vital relationships and dramatic sequence. The lyric poet may sing, if it pleases him, like a bird in the recesses of a garden, far from the noise and dust of the highway and the clamor of men in the competitions of trade and work; but the epic or dramatic poet must find his theme and his inspiration in the stir and movement of men in social relations; he deals, not with the subjective, but with the objective, man; with the man whose dreams are no longer visions of the imagination, but are becoming incorporate in some external order; whose passions are no longer seething within him, but are working themselves out in vital consequences; whose thought is no longer purely speculative, but has begun to give form and shape to laws, habits, or institutions. It is the revelation of the human spirit in action which we find in the epic and the drama; the inward life working itself out in material and social relations; the soul of the man becoming, so to speak, externalized.

The epic, as illustrated in the "Iliad" and "Odyssey," deals with a main or central movement in Greek tradition; a series of events which, by reason of their nature and prominence, embedded themselves in the memory of the Greek race. These events are described in narrative form, with episodes, incidents, and dialogues which break the long story and relax the strain of attention from time to time, without interrupting the progress of the narrative. There are heroes whose figures stand out in the long story