

day must come when bakers will pass examinations before they can hold a license to make bread. All bread will then be made by machinery, and in buildings in which the most careful obedience to the laws of sanitation will prevail. A people who permit an industry, whose product is a food common to every home, to be carried on under conditions that are so revolting as to produce nausea, must recognize in this fact the mark of its low degree of civilization. A bill was passed last May which was intended to improve the conditions under which bread and other bakery products are manufactured, reducing the hours of labor, and requiring rooms separate from the bake-shop for the sleeping-rooms of the bakers—sanitary conditions that merely come within the bounds of decency. To enforce the provisions of the bill it was recommended that four deputy inspectors be appointed. The factory inspection has been as thorough as could be expected when it is remembered that there is but one inspector of bakeries for the entire city of New York. The Factory Inspectors advise the passage of a bill which will prohibit the making of bread in cellars. Regarding the general condition of labor throughout the State, the Inspectors' report is decidedly encouraging. The enforcement of the law regulating child labor has resulted in marked improvement in the conditions surrounding child labor in the State, and a marked increase in school attendance throughout the State.

Last week a resolution was passed at Albany requiring the Superintendent of Public Instruction to transmit to the Legislature whatever information he possessed as to the number of children refused admission to the public schools of New York and Brooklyn because of lack of room. The resolution also called for a general statement of the need of additional school buildings in these two cities. The police census, which has just been completed in New York, throws some light on the question. The total number of children of school age in New York City is given as 448,493. Of this number 192,929 are attending the public schools, 65,285 are attending other schools, 22,780 are at work, 983 are known as truants, 65,117 children between the ages of four and eight years are not attending school, and 101,399 between eight and twenty-one years of age are out of school. Of this last number 5,685 do not speak or write English, 907 are deaf and dumb, 133 are blind. These figures are open to question, doubtless. Many of the children reported as attending school are attending half-day sessions—this compromise the schools have been compelled to make because of the pressure in certain districts. One school below Fourteenth Street has seven hundred children attending half-day sessions. The effect of this state of things is demoralizing.

In Brooklyn the able Superintendent of Education, Mr. W. H. Maxwell, recently called attention to the educational conditions of that city. On September 30, 1895, 9,200 in that city were attending school on half-day time. The overcrowding of classes in Brooklyn is as great as in New York. 262 classes have registers of over 60. Forty-nine have registers of over 70. Twenty-two classes register over 80. Five have registers of over 100 and below 120. One had a register of over 140. Where the register numbers over 80, the classes are divided into two half-day sessions. About 25,000 children in Brooklyn are attending other than public schools. The difficulties attending the gathering of correct data of the number of children of school age unprovided for by the Department of Public Education are many. In New York, for instance, every child who is refused admittance to a school is counted as one. That one child may make application in a half-dozen schools,

and count in each school as one. Then the children in the corporate schools are not counted at all in the school census, though the chief reason advanced for the maintenance of those schools is the inadequacy of the public school. There is in New York City, not a system of public education, but systems. The corporate schools draw from the State, county, and city funds hundreds of thousands of dollars a year to develop and maintain an entirely independent system of education; that is, to maintain as part of a system of charity a number of schools. The income of these corporate schools is on a per capita basis—a most pernicious system because of the temptations it offers to induce children to attend the corporate in preference to the public schools, where no material inducements are offered. In at least two of the wards in New York there are empty class-rooms in the public schools near which are two corporate schools overcrowded. The Amended Laws of the New York State Constitution, Article IX., Section 1, says:

"The Legislature shall provide for the maintenance and support of a system of free common schools, wherein *all* the children of this State may be educated."

Governor Morton in his first message says:

"The new provision of Section 1 of Article IX. requires the Legislature to provide for the maintenance and support of a system of free common schools, wherein all the children of the State may be educated. That is now far from being the case, and the Legislature ought to take immediate steps to fulfill this mandate."

The resolution referred to above is a step toward carrying out the purpose of the amendment and the advice of Governor Morton.

No scientific discovery since that of the principle of the telephone has aroused such wide interest as that of Professor Röntgen's now famous "X-rays." In this country as well as abroad, Professor Röntgen's experiments have been repeated by a host of scientists, and new developments are daily reported. Photographs have already been reproduced showing clearly marked outline pictures of such objects as keys, coins, eyeglasses, pencils, and the like, taken through leather or wooden cases or other solid substances, and of the human hand, showing the shape and articulation of the bones with great plainness. The discovery has already been applied with success in surgery: in Montreal a bullet was located in a man's leg by the X-rays and extracted; in Chicago a buckshot was located in a man's hand in the same way; in Berlin, Professor Röntgen himself, the cable tells us, located a needle which had been swallowed by a seamstress, it being discovered in a corner of her stomach by the new photography, and extracted with safety and with the result, probably, of saving the patient's life. In view of these and similar facts, there can hardly be any doubt that the discovery will be of extraordinary value in a practical way. Thus far the attention of scientists has been directed rather to repeating or improving upon Professor Röntgen's experiments than to defining the exact nature of the new medium. The most original advance is the partly proven discovery that not only can the rays be used for photographic purposes, but that they may be so treated as to present a direct shadow-picture of the hidden object to the eye without the intervention of photography. As to the exact nature of the "rays" which possess the extraordinary properties now brought to light, nothing more definite has been learned than the tentative theory put forth by Professor Röntgen himself. He says:

"A kind of relationship between the new rays and light-rays appears to exist; at least the formation of shadows, fluorescence, and the production of chemical action point in this direction. Now it has been known for a long time that, besides the transverse vibrations which

account for the phenomena of light, it is possible that longitudinal vibrations should exist in the ether, and according to the view of some physicists must exist. It is granted that their existence has not yet been made clear, and their properties are not experimentally demonstrated. Should not the new rays be ascribed to longitudinal waves in the ether?"

The news—if it be really news and not rumor—of Dr. Nansen's safe return from his Polar expedition is so incomplete and scanty that it will only arouse the liveliest curiosity and impatience to learn the history of the great explorer's achievements. The news first came from Irkutsk, and merely stated that Nansen was safe and "returning from the North Pole." Little credence was given to the report at first, as it came from an unexpected quarter, and as several unconfirmed rumors about Nansen have hitherto been printed. Another dispatch, however, was soon received from Archangel, briefly reasserting the same thing. It is supposed that the news may have been brought by natives of the Lena River region, and may possibly have come to them from New Siberia. At present geographers and Arctic experts are inclined to believe that there is basis in the reports that Nansen has been seen, but to doubt the vague statement about the explorer's success in reaching the North Pole. The surprising thing about this report is that it indicates that Nansen has returned to his original starting-point. It will be remembered that his plan was to proceed to the New Siberian Islands or as near them as he could get, and then force his way northward in the sturdy *Fram*, until he should find the current which he firmly believed would in the course of two or three years carry him across the Polar circle and down to the coast of Greenland, thus following the course taken, it is supposed, by the *Jeannette* relics which (it has been alleged, though the fact is now doubted) were found on the southwest Greenland coast in 1884, three years after the *Jeannette* sank north of the New Siberian Islands. If Nansen is now returning by way of Irkutsk, it is quite clear that his original plan has failed, and the most reasonable theory of his having penetrated the region adjacent to the Pole is that he found land at a very high altitude, made the last part of his journey northward by sledge, returned to the *Fram*, and slowly pushed his way south and east by steam-power and drifting until he again reached the Siberian coast. The *Fram* was last heard from two and a half years ago, steering into the Kara Sea, and it is known that the plan of stopping at the Lena Delta and New Siberian Islands was not carried out, the season and circumstances having apparently warned Nansen against going too far east before making his course to the north. Of all recent Arctic explorers Dr. Nansen is the most interesting in personality and most fascinating as a descriptive writer. If he be now really returning from the Polar seas with a record of new and great achievements, the reading world has before it a rare treat in the story as it will be told by him.

The Salvation Army

The Church of Christ has always been a democratic organization; that is, it has appealed to the common people, and has grown by recruits from their ranks. The effect of Christianity has been growth intellectual as well as moral, in culture and wealth as well as in character. Thus, gradually the Church has grown rich and aristocratic, and then the spirit nurtured in the heart of the Church has gone out from it to the poor and the uncultured, and a new growth has started from the roots. The Christianity of Jesus Christ, beginning in the heart of the Jewish Church, laid hold upon the common people whom the Jewish Church

did not reach; Lutheranism gathered its recruits from the peasant population of Germany, between whom and the priesthood a great gulf had opened; Puritanism gathered its recruits, not from the Cavaliers and aristocracy, but from the "tapsters and serving-men;" Methodism went out from the Established Church with its Gospel to the farm laborers and the colliers; and in our time the Salvation Army, beginning in the Church, went beyond its bounds to gather in the destitute and the outcast, whom the Church by its customary methods failed to reach. In three articles we give in this issue of *The Outlook* an account of this great movement—as truly great as that of primitive Christianity under the leadership of Paul, Protestant Christianity under the leadership of Luther, Puritan Christianity under the leadership of Cromwell, or Methodist Christianity under the leadership of Wesley.

Perhaps this is the place to say that we hope that the result will not show that General Booth has made an irreparable mistake in recalling Commander and Mrs. Booth from this country. Loyalty doubtless requires that all the members of the Salvation Army should accept with unquestioning obedience the orders of their Commander-in-Chief, but it does not require that the general public should do so, and it must be frankly said that this recall has administered a severe blow to the public confidence which Commander and Mrs. Booth had won for the Salvation Army by their consecrated zeal and practical wisdom. That confidence may be secured by the successor of Commander and Mrs. Booth. It will be easier for him to secure it than it was for them when they took command in this country ten years ago. But he will have to secure it by his administration; it will not be given to him as of course. For that confidence, so far as this country is concerned, has been largely personal confidence in the Commanders rather than in the organization, whose principle of autocracy does not commend itself to the American habit of mind.

Grounds for Courage

The forces of evil are very apparent; the forces for good less visible—necessarily less visible, for beneficence sounds no trumpet before her, accomplishes her mission unwitnessed, unadvertised. Faint heart never won anything worth winning, and there is sometimes advantage in reinforcing our courage in our combat against evil influences by considering the invisible but potent influences which co-operate with us in the battle of life.

First among these is the home. The police reports a few years ago showed 4,800,000 lodgings in police stations and lodging-houses in one year in New York. That seems an appalling number; but if we multiply the population of the city and the number of the nights in the year, we shall find that between 400,000,000 and 500,000,000 people slept in homes; and though some of these homes are nurturing-places of ignorance and vice, on the whole the influence of the home in America is good, not evil. This is true even of indifferent homes; sometimes even of homes that are bad. A number of years ago the writer visited in Cherry Street a man who had the reputation of being the "wickedest man" in New York. This hero of iniquity put his little boy, four or five years old, on the dinner-table to make a speech for us. "He is a bright boy," said the proud father; "he will be a Senator one of these days. The older boy is not so bright; he is going into the ministry." "Will they live with you?" was asked him. "Oh, no," he said; "they cannot live here. The older boy has gone to his grandfather's in the country already; the younger boy is going soon." The "wickedest man" in