

HOME AND SOCIETY.

American Children at Home and in Society.

THE "Children's century,"* ours is called, by that keen observer, Mr. Henry James, Jr., while entering his protest against the all-pervading American little girl who flies through society on roller-skates, bidding everybody get out of her way. What shall we answer to this, and to many satires of like nature? That the stimulus of this energetic age is felt in our nurseries, none will deny. Behind us we have a throng of eager, nervous, wide-awake little beings pressing forward to the light. That a large measure of our difficulty in training children is due to the defective nursery system in America, is also evident. At a very early age, the child learns to distinguish between the cheerful variety and animation of the down-stairs atmosphere, as opposed to the monotonous limit of nursery entertainment. The average nurse is too often narrow-minded, ignorant, and indifferent to aught in the fulfillment of her duty save what is absolutely nominated in the bond. Her charges, washed, combed, and fed, are abandoned to seek amusement or occupation as they may; and how many lonely hours a solitary child may spend under such circumstances, is not a pleasant subject for contemplation. The governess, like the housekeeper, is, for purely domestic reasons, not apt to be a success when introduced into our ordinary city homes. We therefore regard with astonishment the pictures drawn by our critics of the English girl and boy, conducted along the path of childhood with demure propriety by hired hands. With us, the system is a simple impossibility.

And so, in America, our children are always with us. Strain and chafe as we may against the responsibility, there are the eager eyes and tongues to satisfy, the quick intelligence to feed, the heart and soul like wax awaiting an impression at our hands. In the system of development, the father has, of necessity, an unequal share; his duties are almost confined to a general supervision, a review from week to week of progress made. Upon the mother the burden of this important task devolves; her children are apt not only to reflect, but to exaggerate her methods. What seems a labor of love in the nursery days, becomes increasingly difficult as the children pass into the school-room. Her boys and girls think and act with astonishing independence, long before they are emancipated from the earliest leading-strings. She finds them picking up the books that fall from her hands, learning to discuss the questions that employ her thoughts, sharpening wits with their elders, inhaling with eager zest the exhilarating atmosphere of modern eclecticism. Influenced by the too common apprehension lest her children may not have all the advantages of their contemporaries, encouraged by the plaudits of injudicious bystanders, she is led into doubling their occupations. She forgets that the tendency of this flood of light, turned upon the child from all sides, is to make him superficial,—however it may be urged that an interest in a great variety of questions has the result of cultivating his faculties and of developing his nature.

* See "The Point of View" in this magazine for December, 1882.

Education and entertainment seem to go hand-in-hand for our fortunate children, and it is hard to separate them. Luckily for the mother, who ponders over the most sensible method of securing reasonable diversion for her young, the boy, aided by restless Dame Nature, takes this matter into his own hands. The gymnasium, the swimming-school, the military drill, the foot-ball match, are powerful and wholesome auxiliaries of the mental education of our city-bred boys, and, for a comparatively small outlay of money, are accessible to all. In its moral aspect, the boys' play-ground is no small adjunct to education. Truth and courage are exacted with unflinching zeal by the code which rules their turbulent ranks.

With the daughter there is far more danger of going astray at the outset. American girls are more flattered and indulged, than respected, from their cradle up. They are set by common consent upon so many little pedestals; and the brothers are taught not to argue, but to give up a point at issue, "because she is a girl." Instead of making reason and clear understanding of a subject the basis of her dawning ideas, she is handicapped at the outset by the discovery that, unless a thing is amusing or easily attainable by mental grasp, she may let it go, "because she is a girl." She is brought early into the drawing-room. She is heralded as a prodigy to her mother's friends, most often in her hearing. Her witty sayings are duly repeated to every visitor, and listened to by no one with admiration greater than her own. On occasions when her mother forgets to bring her into conversation, the young lady does not hesitate to supply the invitation.

Often the parents of this small unfortunate one are tempted to indulge her desire to visit places of public amusement. Who has not seen pale, heavy-eyed, overdressed children sitting through the performance at opera or theater? If there were no moral question involved in this, the physical side should be studied. A wise man has said that all the people that ever were supposed to die of poison in the middle ages—and that means nearly everybody whose death was worth speculating about—are not so many as those who die poisoned by bad air in the course of any given year.

Again, at dancing-school, the girl's vanity is fostered. The matter of dress is made of first importance, and the ignoble suggestion "What will people think of you if you don't do this or that?" is made her ruling motive. All the petty jealousies, spites, and feuds hereafter to be developed in the great arena of society are set in action here. The wonder is that, from it all, so many sweet and simple-hearted girls as we are fortunate enough to possess, escape unspoiled.

Constance Cary Harrison.

Women as Piano-Tuners.

EVERY piano has one inherent weakness, which has to be repaired once or twice every year. Under the stress of time, use, and the weather, it loses tune. To restore the instrument to its proper condition is the art of the tuner. In the smaller cities and in the

country, it often happens that the tuner is also obliged to be a repairer of the actions of pianos.

The business of piano-tuning is another of the employments to which women are beginning to aspire. There is in Boston a school where, for some time, tuning has been regularly taught to both men and women. The objection that women have not the requisite fineness of ear is met by the fact that of the applicants for admission to this school only a small proportion fail to enter by reason of any aural defect. The sense of tune or harmony appears to exist in greater or less degree in the majority of civilized people, and, if there is but a germ, it can be educated into something practically useful, be the pupil man or woman. The objection that women have not the strength required in the art is nonsense, for, with the proper tools, a child can break a piano-string with ease. The time required by a young woman to perfect herself in the art of tuning the piano, the pipe and reed organ, is about one year. The course of study begins with a systematic training of the ear in pure unison. For this purpose the pupil is provided with a piano from which the action has been removed. The three strings for each note are plucked with the fingers, and alternately tightened or loosened with the proper lever or key, till the pupil's ear clearly apprehends the difference between unison and discord. No attention is paid to pitch, as the sole aim is to train the ear to a true unison of tones. If the pupil fails in this stage of the work, it is hopeless to go on. She is simply "harmony-blind," precisely as one may be color-blind.

The next step is the training of the ear in pure harmony. For this work a piano is used having a worm and gear in place of the usual friction-pin for tightening the strings, so that the work of tuning is

very light, the slightest movement of the hand controlling the instrument perfectly. The pupil now learns the relations of tones in a true major third. Then thirds are added together till the (tempered) octave is reached. Here the pupil discovers that the pure harmony does not bring the unison she had expected (from her previous studies) in the octave. In this manner the pupil discovers for herself the science of temperament. She soon hears the growl of the "wolf," and learns to catch the wailing "beats" of the interfering sounds. Then the science of tuning must be explained, and this leads to the study of acoustics in their relation to keyed instruments. Lectures and demonstrations in harmony and music are a part of the course. Having made some progress in tuning pianos, the pupil then takes up the tuning of the reed and pipe organ, with daily practice upon both instruments. During the entire course there is also drill in the gymnasium, with proper appliances for strengthening the hands and wrist. A good tuner also should know how to repair a piano. To equip the young woman for this work, there is regular practice upon models of all kinds of piano and organ actions. These are taken to pieces and put together with the usual tools till the mechanism is clearly understood. The action of a piano is easily taken out for repairs, and, as all the parts are interchangeable (for the same style and manufacture), it is not difficult to purchase the various parts and put them in their place when necessary. It is true the action is heavy, but there is always some one near who will lend a hand in lifting it out of the instrument. Piano-tuning is both a healthful and a profitable occupation, and a study of tuning trains the ear to good music.

Charles Barnard.

THE WORLD'S WORK.

Substitute for Hydrogen in the Lime-Light.

THE rapidly increasing use of the lantern in schools, public lectures, and exhibitions has led to a number of experiments to reduce the cost of the lime-light. In point of power and general usefulness nothing better, except electricity, has been found than the combination of hydrogen and oxygen in a single flame thrown against a piece of lime. In a few large cities the gases are easily obtained in commercial quantities, stored in iron tanks, ready for use, and at comparatively low prices. The tanks are troublesome to carry, and in smaller towns the gases must be made on the spot as required, and this involves expensive and troublesome apparatus. Every effort has been made to find a substitute for one of the gases. Street-gas, alcohol, and other things have been tried in place of the hydrogen, but with a decided loss of light. Common ether has been tried several times, but has been considered too dangerous. More recently an apparatus for saturating the oxygen with the vapor of ether has been devised, that appears to remove all

danger of explosion and to give an excellent light. The apparatus consists of two strong brass cylinders, placed side by side upon a wooden support. These are open at one end, and have brass nipples at the opposite ends for receiving the gas-tubes. In each tube is placed a cylinder or roll of loose fabric, like flannel, having a small hole in the middle. These rolls fill the cylinders completely, fitting tight, and leaving only the small passage for the gas through the center of the material. Common photographic ether may then be poured into the cylinders till the wick-like filling is completely saturated, and then the excess of liquid is poured off and put back in its bottle. Two rubber caps, joined together by a short tube, are then fitted over the ends of the cylinders, and to one of the nipples is fitted the gas-tube from the oxygen-holder or tank, and to the other a tube leading to the burner. The oxygen for the burner is supplied by a third pipe. To use the light the oxygen is first turned through the cylinders, entering the rear of one and passing, by means of the short tube,