instead of breathing the same air over and over and over again, fresh air is constantly supplied by this ventilating apparatus.

Mr. Ruttan's system simply consists in introducing pure air into the room, and forcing out that which has performed its functions, or rather which has been once inhaled, and this is accomplished in a way by which the room is kept constantly heated and comfortable. The cold and pure air when introduced, passes over a heated oven, and is sent into the building at a heat varying from 60 to 100 degrees, which can be regulated by the quantity of fire kept in the furnace. Now it must be evident to all that where this is accomplished, the health of the inmates must be materially benefited. Mr. Ruttan says, that by the means of one of these ventilators, no less than 500 cubic feet of air, are brought into the room per minute, and consequently as much foul air expelled. We shall not here enter into an explanation of the principles upon which Mr. Ruttan founds his theories, but we certainly believe them to be correct, and when we say this, we also feel confident that we speak the sentiments of the School Trustees, under whose supervisions the School Houses were built, and so convinced are they of its benefit, that they are determined to have all the School Houses supplied with them.

Our readers must not suppose that this system of ventilation is confined to School Houses, as it can, with equally beneficial results, be introduced into churches and private dwellings. We were shewn a letter from a scientific gentleman in Toronto, who has had it introduced into his dwelling, and who speaks of the whole system in the highest commendation, both as regards health and the minor consideration of economy in fuel, as one of Mr. Ruttan's stoves will suffice to heat a large house.

As Spring will now soon be, and parties will be building, we seriously recommend them to consult Mr. Ruttan before doing so. The whole extra expense in introducing his system of ventilation will not exceed £25, and for this small sum, many of the ills to which the human system is heir, may be averted.—*Belleville Intelligencer.*

CHEMISTRY AND PERFUMERY.

Much aid has been given by chemistry to the art of perfumery. It is true that soap and perfumery are rather rivals, the increase of the former diminishing the use of the latter. Costly perfumes, formerly employed as a mask to want of cleanliness, are less required now that soap has become a type of civilization. Perfumers, if they do not occupy whole streets with their shops, as they did in ancient Capua, show more science in attaining their perfumes than those of former times.

The jury in the World's Fair, or rather two distinguished chemists of that jury, Dr. Hoffman and Mr. De la Rue, ascertained that some of the most delicate perfumes were made by chemical artifice, and not, as of old, by distilling them from flowers. The perfume of flowers often consists of oils and ethers, which the chemist can compound artificially in his laboratory. Commercial enterprise has availed itself of this fact, and sent to the exhibition, in the form of essences, perfumes thus prepared. Singularly enough, they are generally derived from substances of intensely disgusting odour. A peculiarly fœtid one, termed fusel oil, is formed in making brandy and whisky. This fusel oil, distilled with sulphuric acid and acetate of potash, gives the oil of pears. The oil of apples is made from the same fusel oil, by distillation with sulphuric acid and bicromate of potash. The oil of pine-apples is obtained from the product of the action of putrid cheese on sugar, or by making a soap with butter, and distilling it with alcohol and sulphuric acid, and is now largely employed in England, in the preparation of pine-apple ale.

Oil of grapes and oil of cognac, used to impart the flavor of French cognac to British brandy, are little else than fusel oil. The artificial oil of bitter almonds, now so largely employed in perfuming soaps and for flavouring confectionary, is prepared by the action of nitric acid on the fœtid piles of gas tar.

Many a fair forehead is damped with *eau de millefiers,* without knowing that its essential ingredient is derived from the drainage of cow-houses. The wintergreen oil imported from New Jersey, as being produced from a plant indigenious there, is artificially made from willows, and a body procured by the distillation of wood. All these are direct modern appliances of science to an industrial purpose, and imply an acquaintance with the highest investigations of organic chemistry. Let us recollect that the oil of lemons, turpentine, oil of juniper, oil of roses, oil of copaiba, oil rosemary, and many other oils. are identical in composition, and it is not difficult to conceive that perfumery may derive further aid from chemistry.

THE DEPTH OF THE OCEAN.

The Royal Society met on the 27th ult., the Earl of Enniskillen, vice-president in the chair. A very interesting communication from Capt. Denham, R. N., of her Majesty's ship *Herald* was read. Captain Denham is engaged on a scientific voyage in the above ship, and among other subjects, he was particularly enjoined to endeavor on favorable occasions to ascertain the depth of the ocean. The present communication gives an account of a deep sea sounding in 7,706 fathoms, in 36 deg, 49 min. south latitude, and 37 deg. 6 min. west longitude. The sounding was obtained on a calm day, October 30, 1852, on the passage from Rio de Janeiro to the Cape of Good Hope. The sounding line was 1-10 of an inch in diameter, laid into one length and weighing when dry, 1 lb. for every 100 fathoms. Captain Denham received from Commodore M. Keevor, of the United States navy commanding the *Congress* frigate, 15,000 fathoms of this line, 10,000 on one reel and 5,000 on another, and he considers it to have been admirably adapted for the purpose for which it was constructed, and to which it was applied. The plummet weighed 9 lbs., and was 11 inches long, and 1-7th of an inch in Diameter. When 7,706 fathoms had run