NOVEMBER 8, 1888.]

AMATEUR PHYSIOLOGY.

TE are indebted to an American contemporary, the Boston Medical and Surgical *fournal*, for the following article, which possesses more than passing interest at the present time, and we specially commend the same to the attention of the Committee about to be appointed to inquire into our examination system.

"We have previously had occasion to refer to the defective and distorted character of some of the text-books authorised by school boards for the teaching of physiology (and of the effects of alchohol and tobacco). That the work accomplished is sometimes as unsatisfactory as the methods used, is shown by a thoughtful article by 'a teacher' in the Popular Science Monthly for August. The curious hodge-podge produced in the minds of many pupils is illustrated by instances taken from the writer's own observation, and by others quoted from English reports on the same subject, from both of which we ask no apology for quoting the following somewhat extended citations :---

"'It is supposed,' says the London Architect, 'that sanitary science may be taught as easily as morality by listening to a teacher reading from a book. The children fail to catch the words, or they attach no meaning to them. Here, for example, are verbatim copies of the exercises in one of the Greenwich schools :-

" ' Infections are brought on by bad smells, such as small-pox, measles, scarlet fever, glass-pox, s. c., they are brought on by bad drainerges, suers ; they must be well ventalated. Infection disease are caught by touching such as charcoal, chloride of lime, &c. Measles, feaver are called disinfectionous because they are catching .- Fainted. If a person as fainted, take her out in the open air, lay her down with her head. And do the clothing round the neck and dashed cold water in the face and hand and put smelling salts to her nose. Degestion is paines in the head, paines in the stomach, bad tempers. From degestion comes consumption, information, head-ache, neuralgia.'

"In the English official report we read that an examination of girls in board schools for prizes offered by the National Health Society revealed some curious items of information. One reply to 'Mention any occupation considered injurious to health' was: 'Occupations which are injurious are carbolic acid gas, which is impure blood.' Another pupil said: 'A stone-mason's work is injurious, because when he is chipping he breathes in all the chips, and then they are taken into the lungs.' A third says : 'A boot-maker's trade is very injurious, because the boot-makers press the boots against the thorax; and therefore | tary canal, and it extends through the throat,

it presses the thorax in, and it touches the heart ; and if they do not die they are cripples for life.' With a beautiful decisiveness, one girl declares that 'all mechanical work is injurious to health.' A reply to a question about digestion runs : 'We should never eat fat because the food does not digest.' Another states that 'when food is swallowed it passes through the windpipe'; and that 'the chyle flows up the middle of the backbone and reaches the heart, where it meets the oxygen and is purified.' Another says : 'The work of the heart is to repair the different organs in about half a minute.' One physiologist replies : 'We have an upper and a lower skin; the lower skin moves at its will, and the upper skin moves when we do.' One child enumerates the organs of digestion as 'stomach utensils, liver, and spleen."

" In the clever little book compiled by Miss Le Row, entitled, ' English as She is Taught,' appear the following genuine answers by pupils in reply to questions upon physiology and hygiene. Presumably most of these answers are from American pupils in American schools.

"'Physillogigy is to study about your bones, stummick and vertebry." 'When you have an illness it makes your health bad as well as having a disease.' 'The body is mostly composed of water and about one half is avaricious tissue.' 'The body has an infinite number of bones joined together by the joints.' 'The spinal column is made of bones running all over the body. 'Digestion belongs to the lower animals.' 'Digestion is the circulation of blood.' 'Digestion is reducing our food to plump.' 'Digestion is when food is taken into the stomach.' 'The gastric juice keeps the bones from creaking.' The eyes are set in two sockets in a bone which turns up at the end and then becomes the nose." 'The three coverings of the brain are the diameter, the perimeter and the trachea.' 'The growth of a tooth begins in the back of the mouth and extends to the stomach.'

"As an additional contribution to answers, we add the following, taken by the writer from the note-books of pupils of one of the high schools of this country :--

"'Anatomy is dissecting of bodies generally lifeless.' 'Anatomy is study of parts of the body, physiology, study of action of parts, hygiene is application of these parts' (italics are ours). 'Kinds of bathing, adapted to the age, quantity, quality and health of the person.' 'Supernator are the muscles about the back.' 'The hygiene of a muscle should have proper rest and exercise.' 'Hygiene is the study of the time and manner of the action of the muscles and large blood-vessels." ' The mouth is the commencement of the alimen-



