

RESPONSES TO READERS.

All communications for answer in this column should be addressed Correspondents' Department, Family Circle Office, London East.

H. D. L.—The necessary information will shortly be mailed you.

READER.—Notes of congratulation and condolence should be brief, and should not allude to any subject except the one for which you are offering your congratulations or sympathy; they should not be formal in composition, but expressive of real feeling.

STUDENT.—There will be little change in our weekly issues from the monthly. Our Biographical Bureau and Puzzle Column will be inserted once a month. The weekly will not be covered; but monthly parts, containing the weekly numbers of each month, will be neatly bound together and covered.

Mrs. K.—Your constant noticing of the child's weak tendency, especially before company, will surely increase the evil. Gentle reproof with a little reasoning when she is not in an ill humor, and not too frequently, is your most powerful means of training her, or any other child, out of all bad habits.

W. B.—The term, "The Almighty Dollar," is said to have been first used by Washington Irving in "The Creole Village," in the following sentence: "The Almighty Dollar, that great object of universal devotion throughout our land, seems to have no genuine devotees in these peculiar villages."

MAGGIE H.—The gentleman you write of may not have known his mind, or it is possible that something in your conduct has turned him against you. Certainly a gentleman who does not contemplate matrimony has no right to pay exclusive attention to any one young lady, and if he respects himself will be very careful not to give any one the impression that he is devoted only to her. It may be that you exaggerate in your imagination his attentions toward you, not having ever had a beau; but at all events, if he chooses to discontinue your company with indifference you are better without him; and if his affections should still be yours you need not fear that he will not return.

Answers crowded out of this number will appear next week.

HEALTH AND DISEASE.

Mens sana in corpore sano.

Starch in Food.

As soon as a piece of bread is put into the mouth, an abundant flow of saliva takes place; and in fact it needs no actual tasting to induce this flow, for even the sight or smell of anything nice is quite sufficient to "make the mouth water," as we express it. The saliva is poured into the mouth by three pairs of glands, to the extent of some twenty ounces a day. It consists, in great part, of water, with a little salt and a peculiar substance called ptyaline, which possesses the property of changing starch into sugar, the change being accomplished most completely when the starch is dissolved or baked, and at a temperature of about ninety-eight degrees, Fahrenheit, the normal temperature of the body. Although this ptyaline is present in the saliva to the extent of only one part in five hundred, yet on its presence and action, the heat, and consequently the life, of the body is largely dependent; hence the importance of avoiding any unnecessary waste of it, such as frequently and unnecessarily accompanies smoking. Hence, likewise, we see the importance of chewing the food slowly and thoroughly, that it may be all brought under the influence of the ptyaline; and thus we can understand how indigestion, or dyspepsia, may be caused by hasty chewing or by excessive spitting,

the starchy portion of the food in either case lying in the stomach in an undissolved mass.

Bread-making, we have already stated, is a form of cooking. The heat of the oven has converted the outside of the bread into sugar; and the starch in the inside has in fact been boiled in the steam of the water which the dough contained, so that it has become capable of being readily converted into sugar. The porous nature of the bread favors this conversion; for the saliva easily penetrates through the whole of the spongy mass; and the change is still further assisted by the water which the bread contains, to the extent of some forty per cent. Biscuits, on the other hand, being as a rule dry and non-spongy, are less suitable for ordinary use, although containing in the same weight far more food-material than bread.

It may surprise some of our readers to be told that the starch of bread has small nutritive properties. Its sole office is that of a heat-producer; and just like the coal of the engine, the starch or sugar is burned up inside us to keep up the temperature of the machine. It is the gluten, the sticky, tenacious matter in the grain, which is the nutritive, flesh-forming material; but in the present article we have no space to follow the changes which it undergoes in the system, for we are simply treating of starch at present; and we trust we have made it clear how it is changed into sugar, and thus made soluble and fit for absorption into the juices which keep the body at a uniform temperature and in good repair.

It is a common but mistaken notion that sago and tapioca are very nutritious. On the contrary, they consist almost wholly of starch, with only about three per cent. of gluten, so that unless cooked with milk or eggs, they form a very insufficient food. The same is the case with arrowroot; hence it is a great mistake to feed an invalid or a child on such materials. They are no doubt useful as easily-digested heat-producers, but they must be cooked with milk or eggs before they are of much use for natural nutriment; and many a child has been starved to death through its parents' ignorance of this fact. It is true, medical men often recommend arrowroot for those in delicate health, as it is of great importance to keep up the natural heat of the body with the least exertion of the digestive organs; but it cannot be too widely known that arrowroot, pure and simple, is a mere heat-producer; and milk, soup, or other suitable flesh-forming food, must be given with it, if the child or invalid is to be kept alive. On the other hand, semolino, hominy, lentil-meal, pea-flour, etc., contain a much greater amount of flesh-forming material than sago, arrowroot, etc.—*From Chambers' Journal.*

Gluttony Among Great Men.

The fact that some men of genius have been prodigious eaters, in fact gluttons, has led many to the erroneous conclusion that heavy food is essential for the best quality and greatest quantity of mental labor. A writer, who evidently holds this opinion, ridicules Charlotte Brontë because she became disgusted with Thackeray on seeing him eat while sitting beside him at the table on the occasion of first meeting him, although she had formerly idolized him and worshipped his productions. Johnson, Dickens, Thackeray, Bayard Taylor, and other characters whom we might mention, were almost as notorious for their gormandizing as for their literary productions, but their literary fame was achieved in spite of their dietetic abuses, rather than by their aid. It would be very easy to show that several of the literary characters named were cut short in their brilliant careers by habitual abuse of the stomach. A temperate life and a simple dietary would have enabled several of them to prolong their lives to the present moment, with increasing ability in the lines of literary effort for which they were celebrated.