

Certainly, from considerations of cheapness and practicability, they would seem to leave little to be desired. The multiplication of bridges across the great rivers of the West is a movement in the direction of advanced civilization.

Solidification of Powdered Metals.

Professor Chandler Roberts Austen dealt with the formation of solid metals by compressing strongly the powders of the constituent metals. Since 1878, the labors of Professor Walther Spring, of the University of Liege, have been mainly devoted to the study of the effect of compression on various bodies.

The Architect's and Builder's Edition of the Scientific American.

The November number of this splendid architectural journal has been out a few days, and may be obtained at book stores, news stands, or by mail direct from this office. Price 25 cents.

Besides two full pages of colored illustrations of new dwelling houses, the November issue contains engravings of a number of low priced houses, of recent construction, representing the latest designs and accompanied with plan views, showing the interior arrangements of the houses.

A small country church, with plan of the arrangement of the seats, and a stable and carriage house of moderate cost, are among the many other useful subjects treated in the November number; and any persons contemplating the building of a new house, or the remodeling of an old one, will find it to their advantage to consult all the back numbers (thirty-seven already published) of the ARCHITECT'S AND BUILDER'S EDITION of the SCIENTIFIC AMERICAN, and whoever does it will be very likely to save a good many dollars, besides being better satisfied with his improvement from the good suggestions he derived from their perusal.

THE cranks of the age are for the present turning from the congenial labor of inventing perpetual motion machines to invent a new language, which they call "Volapuk." It is a conglomeration of all the modern and some of the dead languages, and an experienced linguist can see little sense in it.

Scientific American.

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FACTS AS TO LONG LIFE.

What tends to long life is a study with more profit as facts are used for data. The editor of a Boston paper, unread in theory, sent blanks through Massachusetts to men and women of eighty years and more, inquiring as to habits, state of eyes, teeth, hearing, and the like, getting over 3,500 replies, and if in these there is nothing to refute the assertions of the theorists, there is yet not anything to sustain them.

They ate meat, save in a few cases, ad lib., and though none of them, if we take their own word for it, have drunk freely of spirits, all, or nearly all, have taken of them on occasion. These old people are from cities, towns, agricultural and maritime districts, in nearly all cases leading active lives, eating three meals a day, the dinner being, as is the custom in New England, in the middle of the day, of meat and vegetables, and pie, and very hearty. Curiously enough, though the women are of medium height, the men are mostly tall, above the average; and so greatly do blue and gray eyes prevail that other shades are notable exceptions. Baldness is rare, the hair being usually brown and thick, but the teeth are very poor or entirely gone. The report says:

"These old people, men and women alike, are early risers almost without exception, and fully nineteen out of every twenty have observed this custom throughout life, except, perhaps, in some short period of youth. . . . Exercise has been hard up to sixty-five or seventy years, and after that period has consisted (when the regular occupations have been given up) of walking or gardening, or both. Except in cases of sickness, these old people are as active and as fond of constant occupation of some sort to-day as most men and women are at thirty-five. One of the most significant facts gathered in this canvass is that regarding occupation. Out of 1,000 men, throughout life, 461 have been farmers; 92 have been carpenters; 70, merchants; 61, mariners; 49, laborers; 42, shoemakers; 41, manufacturers; 23, clergymen; 23, masons; 16, blacksmiths; 16, bankers; 12 each iron workers, mill hands, physicians, and lawyers; and the rest are divided among nearly all the other trades and professions. Eight hundred out of twelve hundred have been farmers' wives, and all but about fifty of the remainder have been housewives."

Tea and coffee drinking was indulged in by fully two-thirds of the 3,500, with some of them to excess; and of the men, nearly all have both smoked and chewed tobacco, the amount daily consumed by some having been enormous.

Their cares were as heavy as those which come to most of the human family, their work not less arduous. Most of them led lives which some might call monotonous, yet with occasional excitement to them as great as the intenser kinds to those more used to it.

Summing up all that the compiler has set down from the answers sent to his questions, we find that all were regular in their habits, with plenty to occupy their hands and minds and getting plenty of fresh air. This seems to be at least a primal quantity in the solution of the problem of long life. Men like these, with plenty of work and fresh air, are able to eat and smoke, even to a point we would call excess, without injury, and even to drink at times with no evil resulting. It is those of sedentary habits, who do no hard labor and get little exercise or fresh air, who must be the most careful.

QUICK LETTER DELIVERY.

No mail service can be said to be good enough while a better one may be had. In New York City such possibility is clearly in sight, the means at hand, the way clear, and all that is wanted to take advantage of the conditions existing, an order from the postmaster-general and the preparation of a time schedule. Three lines of elevated roads traverse the city, with trains running constantly and rapidly, and horse car lines bisecting them at every principal point. How easy to dispatch a letter quickly by means of these, if only some of the "routine" and manipulation now employed were dispensed with! Now, a letter posted say in lower Broadway and directed to West 25th Street, must needs be taken to the general post office. Thence it goes uptown, perhaps by elevated train, perhaps by wagon, and to the sub-station nearest. As will be seen, it is delayed while en route to the general post office, again, if it goes by the elevated, while taken afoot to the sub-station. Supposing now the sub-stations were all arranged on the line of the elevated roads or the crosstown horse car lines, and let us suppose also that the carrier, on finishing his collections from the lamp post boxes, takes his letters directly to the nearest elevated railroad station, leaving the pouch for the first post car [a small section of a car would be sufficient for the purpose, and say there was such a one every 15 minutes]. With the letters assorted simply as to the nearest sub-stations, the work could be quickly done, a man from each ready on the platform to take the packet for his station, and then hurrying off to the near-by branch office or taking a crosstown car for it, leaving a mate to await the next trains, down and up.