What is the cause of this error of judgment? It is that the eyes having seen seven or eight red pieces in succession, are in the same condition as if they had regarded fixedly during the same period of time a single piece of red stuff; they have then a tendency to see the complementary of Red, that is to say, Green. This tendency goes of necessity to enfeeble the brilliancy of the red of the pieces seen later. In order that the merchant may not be the sufferer by this fatigue of the eyes of his customer, he must take care, after having shown the latter seven pieces of red, to present to him some pieces of green stuff, to restore the eyes to their normal state. If the sight of the green be sufficiently prolonged to exceed the normal state, the eyes will acquire a tendency to see red: then the last seven red pieces will appear more beautiful than the others."

Mr. Sheriff Ruttan's ventilating Car is acquiring favorable notice in the States. At the request of the passengers in the ventilated car on the New York and Erie Railroad, the subjoined expression of their approval was drawn up, and unanimously signed:

"We, the undersigned, now riding in one of the cars of the New York and Erie Railroad, ventilated by Henry Ruttan, Esq., of Cobourg, Canada, are highly delighted with the results of the experiment, and have never before travelled so comfortably and pleasantly, at this season of the year, upon this, or any other Railroad. This day, August 24th, is excessively hot and dusty, the entire train being enveloped in one continuous cloud of dust; and yet, in this car, so admirably does the ventilator perform its work, that the atmosphere about us is entirely free from dust and oppression, while we are continually breathing a pure and invigorating air. We unite, most heartily in urging upon Railroad Companies everywhere to adopt in their cars this method of ventilation, which is superior in every respect to any other mode which we ever experienced or heard of."

The production of Cotton in Southern States of the American Union, has wonderfully increased during the last few years: we take from a Philadelphia paper, the following notice of this remarkable progress:—

The earliest record of an export of cotton from the country (U.S) is dated 1747, when seven bags were shipped from Charleston. Thus then, in less than one hundred years the trade has increased to millions of bales per annum. A curious feature in the history of this fabric is, that in 1784, or little more than half a century ago, a shipment of 71 bags of cotton was made from the country to England, and on its arrival it was seized by the authorities, on the ground that America could not produce a quantity so great.—The average annual yield for the last five years ending 1835, was estimated at 1,000,055, bales. The average yield for the same period ending in 1840, was 1,440,000 bales; and the average annual yield for the like period, which terminated in 1850, was 2,270,000 bales. The total product of 1853, was 3,263,882 bales. In this connection the following comparative statement of the growth will be regarded with interest:—

1824,	569,249	bales.
1834,	1,254,328	"
1844,	2,394,503	"
1853,	3,262,882	"

The consumption for the last year named may be thus divided:

Export to Great Britain,	1,736,860	bales.
" France,	426,728	"
" North of Europe,	171,176	"
" Other foreign ports,	193,636	"
Retained for home use	671,009	"

The Montreal *Pilot* says,—"On the 24th July last we received an invitation to the laying of the first stone in the bed of the river, for the construction of the first pier of the bridge, and now, on the 14th September, when we write, pier No. 1 has arisen several feet above the level of the river, and the process of binding the blocks may be seen and understood. Each stone of the structure is clamped to its fellow by bands of iron, and the interstices are filled with molten lead and the strongest Roman cement. The result will be the construction of masonry as durable as that of the Collisseum or the Appian Ways, which have stood the wear and tear of time and of traffic for more than 2,000 years, and which still continue to exist as monuments of the skill and industry of man. It is a thing worthy of note, that in a new and rising country, only known to civilized men for two or three hundred years, monuments should arise to mark the progress of the age, and to compete in the world's esteem, with similar works constructed two or three thousand years ago; and if the rapid and mighty St. Lawrence is mastered by such works, then indeed is the achievement one worthy to be chronicled."

The State of Maine in an article on the same structure informs us, that: "Each of the tubes will be 19 feet in height at the end, whence they will gradually increase to 22 feet 6 inches in the centre. The width of each tube will be 15 feet, or 9 feet 6 inches wider than the rail track. The total weight of iron in the tubes will be 10,400 tons, and they will be bound and riveted together precisely in the same manner and with similar machinery, to that employed in the Britannia Bridge. The principal part of the stone used in the construction of the piers and abutments is a dense, blue lime stone found at *Point Claire*, on the Ottawa river about 18 miles above Montreal, about 8 above the confluence of that river with the St. Lawrence. A large village has suddenly sprung up at the place, for during the last twelve months, upwards of 500 quarrymen, stone masons, and laborers, have been employed there. Every contrivance that could be adopted to save manual labor, has been applied, and its extent will be judged from the fact that the machinery at the Quarry and at the adjacent jetty has (including the cost of the jetty) involved an outlay of £150,000. Three powerful steam Tugs and 35 barges capable of carrying 200 tons of stone, have been specially built for the work, at a cost of about $120,000. There are used for the conveyance of the stone to the piers, and by the end of September next, a Railway on the permanent line of the Grand Trunk track, will be laid down from the quarry (close to which the permanent line will pass,) to the north shore of the St. Lawrence, so as to convey along it, the stone required for the North embankment and for the northern abutment.

"The piers close to the abutments will each contain about 6,000 tons of masonry. Scarcely a block used in the construction of the piers will be less than 7 tons of weight, and many of them, especially those exposed to the force of the current, and to the breaking up of the ice in spring, will weigh fully 10 tons each. As the construction of "Pier No 1" is already several feet above the bed of the river, the process of binding the blocks together can now be seen and appreciated. In addition to the abundant use of the best water cement, each stone is clamped to its neighbors in several places by iron rivets, and the interstices between the rivets and the blocks are filled up with molten lead. If the mighty St. Lawrence conquers these combined appliances, then indeed is there an end to all mechanical resistances.

"In consequence of the increased height and width of the piers converging towards the centre, the weight of stone in those that will bear the centre tube will be about 8,000 tons each. The total amount of masonry in the piers will be 27,500,000 cubic feet, which at 13½ feet to the ton, gives a total weight of about 205,000 tons."

The London *Daily News* publishes the following result of the analysis of reports from 134 correspondents, spread over the 40 English counties: "Wheat—Very good, excellent, average, 31; good, full average, full crop, &c., 49; average, pretty good, &c., 32; near average, 4; under average, thin, &c., 12: middling, doubtful, or various 6. Totals—Favourable, 112: unfavourable, 12; neuter, 10. Barley—127 reports resolved themselves into: Very good, over average, abundant, &c., 33; good, full average, full crop, &c., 40; average, pretty good, &c., 20; short, light, indifferent, &c., 12; various, irregular, &c., 12. Totals—Favourable, 103; unfavourable, 12; neuter, 12. Oats—128 reports given; Excellent, over average, very good, &c., 25; good, full average, &c., 46; average, fair, pretty good, &c., 33; near average, tolerable, middling, various, &c., 11; under average, short, light &c., 13. Totals—Favourable, 104; unfavourable, 13: neuter, 11." Partial inquiries made in the Irish, Scotch and Welsh counties give similar favourable results.

In Dr. Carpenter's new edition of his Comparative Physiology many generalizations possessing peculiar interest are to be met with. Chapter I. is 'On the general plan of organic structure and development.' After a survey of the Vegetable and Animal kingdom, it illustrates the progress from *General* to *Special* in development, and closes with a notice of the 'Geological succession of Organic Life,' of which we present a short extract exemplifying the reasoning of the author. "Thus the earliest species of Palæotherium (a herbivorous quadruped having some affinity with the Tapir, but more with the Horse of the present epoch,) had the complete typical dentition, with three well developed toes on each foot; but a later species approached the horse more closely, in the reduction of the outer and inner toes, leaving the central one much larger in proportion; and in a still later species, the outer and inner toes are much more reduced, and the form and proportions of the rest of the skeleton and teeth are brought