

the skins of other fishes make a cement which is much valued for its transparency and tenacity
Furniture Gazette.

British Takings.

In the cereal year ended August 31st, 1883, there were imported into the United Kingdom an equivalent of wheat and flour of about 20,000,000 quarters of grain net. Computing the deliveries of home-grown wheat there by the old method of multiplying the sales returned from 150 towns by 4 up to the time that they were returned from 187 towns, and thenceforward multiplying them by 3, the quantity of home-grown wheat delivered during the cereal year was 9,231,109 quarters, thus giving the trade a total supply of foreign and native wheat amounting to 29,231,109 quarters.

The consumption of wheat in the United Kingdom is computed by the more reliable authorities upon that question in England at 5½ bushels per capita per annum, which for their population of, say, 36,000,000, would require 198,000,000 bushels per capita, per annum, which for their population of, say, 36,000,000, would require 198,000,000 bushels, or 24,750,000 quarters. This is at the rate of about 476,000 quarters weekly. According to the overgoing data, the total supply of foreign and native wheat received by the trade, i.e., importers, dealers, millers and bakers, exceeded its requirements for the year ended August 31st, 1883, by nearly 4,500,000 quarters.

Owing to the comparative abundance and cheapness of potatoes, and the extreme mildness of the winter, it may safely be assumed that the consumptive wants of the United Kingdom will be no greater this cereal than they were last.

In an average of cereal years, the deliveries of home-grown wheat in the first five months comprise one-half of the total deliveries for the year; and as the sales in 187 towns during the past five months in the current year were 1,425,000 quarters, this quantity multiplied by 3 gives 4,275,000 quarters as the quantity delivered in the Kingdom during that period, and implies that the total for the year will amount to some 8,550,000 quarters. This quantity, added to the overplus of 4,500,000 quarters, carried forward from the previous year's operations, provides 13,050,000 quarters toward this year's wants of 24,750,000 quarters, and shows a required import for actual food wants of only 11,700,000 quarters. It will be remembered by the readers of *The Journal* that early in the season we estimated these wants at 12,500,000 quarters, while many of our contemporaries, in fact, nearly all of them, losing sight presumably of the immense addition made to stocks in the previous year, were estimating from 16,000,000 to 17,000,000 quarters as the import quantity required. But let us adhere to the original estimate of *The Journal* of 12,500,000 quarters, and then see how the British account stands. They imported in the first five months of this year, in round numbers, 7,500,000 quarters in wheat and flour, which leaves only 5,000,000 quarters or 40,000,000 bushels to import during the remaining seven months of the cereal year. Of this quantity there were over 2,000,000

quarters on the way to the United Kingdom at the beginning of these seven months, which leaves only 3,000,000 quarters or 24,000,000 bushels more to be shipped during that long period.

Now, *The Journal* does not pretend that the United Kingdom will not import at present low rates a considerably larger quantity than our figures indicate; but at the same time these figures show how little the British can easily get on with, and the extent of their ability to withhold from further buying abroad. We understand perfectly well that British buyers do not entirely own or control the huge stocks of wheat and flour now held in the United Kingdom, since the portion of them lodged at the ports, and amounting, probably, to the equivalent of some 3,500,000 quarters of wheat, are presumably owned chiefly by importers. Still, if the crops continue to be generally well spoken of as the season progresses, these big stocks must necessarily exert a depressing influence in the markets, both here and in foreign countries. As British millers are fairly stocked, this depression would enable them to make further direct purchases of wheat abroad at about the equivalent of English prices at the ports, and thus leave the stocks there intact to continue their depressing influence. *Millers' Journal*

Irrigation.

Irrigation is no new matter in British India. It has been practiced from time immemorial, and the entire country is dotted with tanks, many of which are of enormous size, that have been constructed for storing water for this purpose, this plan is necessary not, as might be supposed, on account of a scarcity of rain, but because the fall is confined to a few months of the year, and usually comes in the form of a deluge. For example, the rainfall during a period of four months on the west slope of the Neilgherries is about 400 inches, and on the mountains east of Calcutta 600 inches and even more. In the Carnatic, the region south and west of Madras, there are only about 40 inches altogether. This falls principally in heavy bursts, often ten or twelve inches in a night, thus giving half a year's supply in two showers. In the Madras Presidency alone there are 40,000 tanks for the storage of water, many of which are magnificent works from ten to twenty-five miles in circumference and from ten to sixty feet deep. One of these reservoirs will contain the enormous quantity of 100,000,000 cubic yards of water. Besides these tanks there are many old irrigating canals leading off from the rivers, these are supplied by noble weirs built of immense stones across the streams, the ingenious construction of which, by the natives, has shown the British authorities the best way of doing similar work on a much larger scale across some of the largest rivers in India. For many years the Indian government has been engaged in the improvement of the ancient irrigating works and in perfecting new systems. In the Tanjore district alone the returns to the government from this policy have been enormous, the revenue having increased £350,000 a year upon an expenditure of £400,000. The system has been extended to a very considerable extent in various other parts of India, and all the belts of

land, comprising many millions of acres, which have been reached by this grand system of irrigation now present a marked contrast to the immense tracts of arid waste which met the eye of the traveller a few years ago, compelling even the haters of English rule to acknowledge that no such benefit was ever bestowed upon India before. An idea of the magnitude of an irrigating canal which is needed to water a million acres may be found when it is understood that such a waterway must be two hundred yards broad and three yards deep, flowing one and a half miles an hour, and capable of floating large steamers conveying millions of tons per annum. In the gradual and systematic prosecution of this vast work of irrigation Great Britain is conferring enormous benefits upon the people of India, not only providing against future years of famine, but rendering the soil so fruitful that it will be no marvel within a few years if it should produce a large surplus of wheat and other cereals for foreign nations. *Bradstreet.*

Forests and Their Effects Upon Floods.

The *Northwestern Lumberman* assails a quite generally accepted theory in the following vigorous manner:—

"We would like to have the individuals who are clamoring for government interference for the prevention of floods, answer the following question. If the denudation of forest lands on the upper Ohio and tributaries was the cause of the flood last year and the disastrous overflow now prevailing, what is the cause of the rise in the Arkansas, St. Francis and Red rivers of the south, all of which are now booming? Do those afflicted with the denudation craze know that the rivers mentioned flow mostly through densely wooded districts? The writer was lately in the forests of the Yazoo delta, miles from human habitation. At the time it had been raining like a deluge for days. The ravines and gullies were carrying great volumes of water into the bayous and rivers. Did the heavy growth of timber, the mosses and interlacing roots stop the outflow? Not any worth mentioning. Water falling on the surface of the earth will seek a lower level, whether it is overshadowed by trees or not. Floods occurred hundreds of years ago, the same as they do now. Men talk as if there never was a flood in the Ohio or Mississippi until 1882 and 1883. One of the biggest rises ever known to white men in the Ohio occurred in 1832, when it and its tributaries still flowed through the almost unbroken primeval forest. If the question were thoroughly looked up in its far reaching historical features, it would be discovered that never in the annals of this country was there a more idiotic, baseless conclusion than that now prevailing in the popular mind about the denudation of forest land causing recent floods in the great rivers."

At present there are about 7,000,000 acres under wheat in the Punjab, the produce of which is estimated to be equal to that of the United Kingdom, which it would be at 11 bus. per acre; while in the whole of India the area of the wheat crop is put by the government statisticians at about 19,329,000 acres, and the product at about 26,500,000 quarters.