

Can Flax be Employed as a Substitute for Cotton.

The following remarks relative to this very important question, are condensed from the Manchester (Eng.) Examiner, and are the most sensible of any that we have seen in any cotemporary —

"It is not necessary only that it should be proved that flax may be mixed with cotton, or worked alone in cotton machinery, but it must be shown that flax so prepared can be afforded at a price so low as to compete with cotton when the American season yields a fair average crop. It is quite possible that flax may be worked to a slight advantage with fair cotton at 8d. per lb., and yet that it could not be so worked if cotton fell below 7d per lb. If flax cost the spinner 7d per lb., there would be no inducement to use it so long as cotton did not rise higher than 7d. The question of the price is then all important, and on this point we have endeavored to obtain some information. We understand that the price of flax in the straw is about £4 (\$19.40) per ton, or something less than one half-penny per lb. Three tons of the straw are estimated to make about five cwt. of clean fibre by the existing process; but it is calculated that by the improved methods adopted by Mr. Claussen, at least 6 cwt. will be obtained, and that this can be produced ready for the blower or scutcher in a cotton mill at a cost of 2½d., or not exceeding 3d per lb. It will be seen that in addition to this, there will be a great saving in loss or waste, as compared with cotton, because when the flax enters the blower it will have been already thoroughly cleaned, and cannot lose anything in the process of working beyond some of the finest and lightest fibre.

Besides the question of price, there is also the question of quantity. It may be said if flax be introduced into cotton mills, it will at once become dearer, from the increased demand for it, and the whole advantage from its supposed cheapness, as compared with cotton, will disappear. At first sight this seems to be the case; but a little examination will serve to dispel any great fear on this point. From a Parliamentary return now before us we find that the quantity of flax and tow imported into this country, in the ten months preceding the 5th November last, was 1,610,185 cwt., or upwards of 180,000,000 lbs. weight; and, adding what may have arrived during November and December, we may perhaps, estimate the import for the present year at 200,000,000 lbs. Now, the largest import of cotton in any one year, was in 1849, when upwards of 750,000,000 lbs. were received. The import of flax therefore, is very far below that of cotton. It must, however, be borne in mind, that flax is extensively cultivated in the United Kingdom, and probably not less than from 40,000,000 to 50,000,000 lbs. are annually grown at home; thus bringing up the whole supply of flax to 250,000,000 lbs., or in weight to one-third the whole import of cotton. The cultivation of flax is also engaging much of the attention of the "agricultural mind" just now, and the permanence of a moderate price of grain will induce many farmers to attempt the growth of flax. Flax, too, is an article which can be grown, not only in the United Kingdom, but to any extent in most parts of Europe, and there can be no doubt that any increase of demand from the introduction of flax into cotton machinery will soon be met by an increased growth in many parts of the world. We may observe also, that the extension of the use of flax will not be so very rapid. There will be difficulties to encounter and overcome, which, as yet, are probably altogether overlooked. Inventors and patentees, though often among the most able men, are generally among those most frequently deceived and disappointed. Mr. Claussen is sanguine of success, and the results of his experiments give ground for hope; but he can imagine a fair success, in an experiment which is not capable of a complete and speedy realisation on a large scale.

We think it probable that the mixed flax and cotton may serve for weft, where great strength is not required, but we have less confidence with regard to warp."

In addition to the above, we would state

that we do not believe a good and durable fabric can be made out of cotton and flax mixed together. It is true that flax is stronger than cotton, but its nature is altogether different, and the mixture will make a more brittle fabric than either pure cotton or linen goods:— We know that this is the case with linen weft employed on cotton warps. It makes a beautiful and strong fabric, but the nature of the two is so different, that the cloth cuts, or rather breaks like glass. And sometimes the linen weft in the loom, if the weft is drawn tight across the raceway of the shuttle, cuts the warp entirely through. This has happened frequently in a factory which we know.

Our Navigation.

The following statement shows the number and tonnage of the vessels built in each State and Territory of the United States, for the year ending on the 30th of June, 1850. It is taken from the Report of the Secretary of the Treasury, transmitting the annual report of the Register of the Treasury of the commerce and navigation of the United States for the fiscal year.

Of the vessels comprised in the table, there were two hundred and forty-seven ships, one hundred and seventeen brigs, five hundred and forty-seven schooners, two hundred and ninety sloops and canal boats, and one hundred and fifty-nine steamers. The largest number of ships built in any State was one hundred and twenty-seven, in Maine; and the largest number of steamers, thirty-four, in Kentucky. The largest tonnage set afloat during the year is that of Maine, and the next largest of New York. Of the one hundred and fifty vessels built in Maryland, one hundred and twenty-five were schooners.

RECAPITULATION.

States.	Vessels built.	Total tonnage.
Maine,	326	91,211 73
New Hampshire	10	6,914 32
Vermont,	1	77 41
Massachusetts	121	35,836 14
Rhode Island,	14	3,587 15
Connecticut,	47	4,819 79
New York,	224	58,342 73
New Jersey,	57	6,201 68
Pennsylvania,	185	21,409 93
Delaware,	16	1,848 82
Maryland,	150	15,064 80
District of Columbia,	8	288 17
Virginia,	34	3,584 04
North Carolina,	33	2,651 59
Georgia,	5	683 82
Florida,	2	79 75
Alabama,	3	113 66
Louisiana,	24	1,592 38
Kentucky,	34	6,460 69
Missouri,	5	1,353 82
Illinois,	13	1,691 21
Ohio,	31	5,214 62
Michigan,	14	2,061 63
Texas,	1	105 54
Oregon,	2	122 42
Total,	1,360	272,218 54

Basaltic Columns.

Hornblend is more tough than hard. So its name indicates. It enters largely into rocks. Hornblend rocks form some of the most beautiful and sublime mountain and landscape scenery in the world. The Giant's Causeway, in the north-east part of Ireland; the Palisades, on the banks of the Hudson river; the Bluffs, called East and West Rock, each about two miles from New Haven, Connecticut, Mount Holyoke and Mount Tom, on the Connecticut River; the richest landscape scenery on the Columbia and other rivers in Oregon; and many other views, both rich and beautiful, in different parts of the world, are hornblend rocks. The Scenery about Edinburgh, Scotland, is said to resemble very nearly that about New Haven, Connecticut, exhibited by the same geological formation—basaltic columns. In both these cities it is the common almost only building material, admirably fitted for the gothic style of architecture. Some poet said of the Citizens of Edinburgh, who have very much impaired the natural scenery about the city for the purposes of architecture, that they had so little taste that they sold the sublime and beautiful by the cartload. These

columns are very much in the form of hexahedral prisms, from six inches to a foot or two in diameter.

[The above is from one of Josiah Holbrook's letters in the Washington Globe. If he were to travel more extensively, he would be more correct in his representations.

The Age of Gold.

The progress of this age shoots ahead of all calculation, and we must make up our minds to allow nothing to surprise or astonish us. It is less than seven years since our commerce in the Pacific seemed to be limited to our whalers and a few trading ships to Valparaiso and Callao. Panama was only known as a neutral ground, where a congress of nations was to be held. Vessels occasionally reached California, and now and then a ship bound to the mouth of the Columbia River for a cargo of furs passed by the golden gates of San Francisco, when even its handful of inhabitants had no idea that they stood on mines of the precious metals; yet in that short space of time what wonderful changes have taken place! A war with Mexico—the conquest and surrender of California—millions on millions of gold dug from the bowels of the earth—a thousand ships lying in the bay of San Francisco—a hundred thousand inhabitants in San Francisco—immense emigration pouring in from all directions.

Five years ago, California had a white population of less than 5,000 inhabitants. She is now a State that boasts of a population that numbers almost a half a million. Five years since, Monterey, her capital, had only 300 inhabitants. San Francisco to-day has a population four times as large as the whole country could boast of in 1845. Five years since, California was but little better than a wilderness, while her population confined their ambition almost entirely to the pleasures that spring from scratching and praying.

Fifty millions of dollars have already been exported, and millions are monthly sent to different parts of the world.]

Lines of steamers already connect us with San Francisco, and other lines will soon connect San Francisco with Asia and other parts of the world. A ship canal is constructing across the Isthmus to connect the oceans, and our great central railroads are reaching their iron arms thitherward, and in ten years we imagine they will reach the quiet city of the Pacific.

The history of the world presents nothing to be compared with the rapidity of progress, and the development of the resources of the Pacific coast. At the ratio of progress for the last five years past, one generation will not pass away before San Francisco will be numbered among the great metropolitan cities of the world; reaching one arm westward to Asia, and the other eastward to the Atlantic coast, she will grasp the trade of a large portion of the two hemispheres.

French Statistics.

The annual consumption of bonnets, in France, amounts to 25,000,000 francs. The exports of fine and common felt, silk, and straw bonnets exceed 2,850,000 francs per annum.

In Paris and its neighborhood the habitations of one million of citizens do not cover a space of more than 6,075 acres, but this million of individuals, by its talent and industry, gives to the raw materials on which they work a surplus value surpassing the produce of 16,200,000 acres of land—a quantity equal to the produce of Bavaria, Saxony, and Portugal.

No less than 10,000,000 francs worth of shawls are exported every year, and as much consumed in the home trade.

In 1807, the period when France commenced the manufacture of ultra-marine, it cost 1,900 francs for 2 lbs. and 3 ounces; now 10 francs will buy as much.

There are upwards of 200 manufactories of paper in France, employing 4,900 persons, and making 2,900,000 reams per annum.

There is 53,500,000 francs worth of jewelry and silver plate manufactured per annum.

France has not been so prosperous since the revolution of 1848 as she was before that time from 1844; she is now progressing again. The

French are becoming good builders of locomotives, but are far behind, yet, in marine steamships.

Roads.

In constructing roads it is far better to make them as level as possible at first, and rather go round than up the hills. It is calculated that the power of a horse, on a level, averages 1,000 lbs., at a moderate pace, and in a rise of 1 in 100 feet he can draw only 900; 1 in 50, 810; 1 in 44, 750; 1 in 40, 720; 1 in 30, 640; 1 in 26, 540; 1 in 24, 500; 1 in 20, 400; 1 in 10, 250. In round numbers, upon a slope of 1 in 44, or 120 feet to the mile, a horse can draw only three-quarters as much as he can upon a level; on a slope of 1 in 24, or 220 feet to a mile, he can draw only half as much; and on a slope of 1 in 10, or 528 feet to the mile, only one-quarter as much. Though a horse on a level is as strong as five men, yet on a steep hill it is less strong than three; for three men, carrying each 100 lbs., will ascend faster than a horse with 300 lbs. The popular theory that a gentle undulating road is less fatiguing to horses than one which is perfectly level, is pronounced erroneous.

New Wingless Bird.

At a recent meeting of the London Linnaean Society. Mr. Westwood called the attention of the society to a wingless bird on Lord Howe's Island—an island between New Holland and Norfolk Island. This spot had been accidentally visited by Captain Poole, of the East India's Company's service, who, considering it a favorable spot for colonization, had induced six Irishmen and their wives and families to settle on it. The place is now one of constant resort for the supply of water and provisions to the South Sea whalers. It is of considerable extent, and has on it two high hills which can be seen at a distance of sixteen leagues at sea. On this island Captain Poole had discovered the bird in question. It is about the size of a quail,—and is considered by the settlers as good eating. Mr. Westwood thought the announcement of the existence of this bird—which was not previously known to exist in those regions—would be received with interest in connection with the discovery of the extinct wingless birds of New Zealand.

Air Locomotives Again.

M. Filopanti, a foreign gentleman a little distinguished for scientific knowledge, gave a lecture on the evening of Thursday, last week, in explanation of his method to navigate the air. Among the gentlemen of science present were Profs. Loomis, Draper, Gibbs, and others. He advocated rarified air as the cheap inflating material. He stated that an air-ship of cylindro-spherical form (Bell's) could be made to go at the rate of 11 miles per hour, carry 328 passengers, and cost only \$20,000. This ship is proposed to carry passengers to California, and is to be 120 feet in diameter, 960 feet long, with inside air at 340° of heat, to be propelled by a locomotive of 240 horse power. Besides the cost mentioned, intermediate stations are to be made to take in supplies from, so that there will be no use of either Whitney or Benton's railroad being constructed—no use, for this will be an infinitely cheaper method of travelling, and surely there must be some certainty about the success of the project, when such savans as Gen. Tallmadge, President of the American Institute, and the distinguished Professors whose names we have mentioned, grace such select audiences. But there is one thing we must say, however, and that is, Prof. Filopanti's project is no better than a *fillipino*—it is inferior to the old Porter & Robjohn balloon, which was got up in 1849 to go to California in three days, and which attracted such large crowds to the Tabernacle, one night, and which didn't go at all. A practical demonstration of successful, cheap, and safe aerial navigation, would do more than ten thousand lectures to prove its utility.

A Remington Bridge Fallen.

The Amsterdam (N. Y.) Intelligencer states that the bridge built the last season, and recently finished, across the Mohawk, at Tribes Hill, on the Remington plan, went down last week, being unable to sustain its weight from its immense length.