

Great Britain has a large and fine exhibit in many of the sections. Germany also has won many honors, and Austria, Holland, Belgium, France, Italy, Brazil, etc., all show beautiful and instructive samples of manufactures and products. Japan, though she has a good deal to do at home just now, has a great exhibit in many sections, having a fine display in the Forestry and Fisheries, Transportation, Manufactures, Varied Industries, and other palaces. Even Russia has her share, though not a large one, in the show.

THREE AGRICULTURAL KINGS.

In the Palace of Agriculture, each State or country represented had a large ornamental structure adorned with the products peculiar to it, such as tobacco, fruit, corn, etc. Canada's erection, showing grain in the straw principally, was very fine and won the grand prize. The State of Mississippi had a large sitting figure, about thirty-five feet high, made entirely of cotton, with a glittering crown on its head, which did not need the label attached to it, "King Cotton," to indicate what it was intended for. Corn, however, in the profuseness with which it was used for adornment, as in the annual value of the crop, outranked king cotton. From Canada and the Northwest States wheat was the principal product shown. These three are the staple crops of North America. Each has a wide, loosely-defined belt across the continent, specially suited for its growth, and each in its latitude is king—wheat, corn, cotton.

ELECTRICAL MARVELS.

The great place that is being taken by electricity in the work of the world must have impressed every visitor at the Fair. Not only was one large building devoted solely to an exhibit of electric appliances, but the greater part of the display in Machinery Building, and a large part of that in the Manufacturers', was also of the same nature. Huge dynamos were there by the hundred, and there were also the tiny contrivances and conveniences. I had the pleasure of writing my name, and seeing the writing reproduced exactly at a distance of twenty miles, by wire. A motor far running a home sewing machine could be seen, about the size of an ordinary apple-paring machine. Also, a smoothing iron heated by wire, and a vest-pocket electric light, which, on pressing the button, made a great light through its bull's-eye.

Perhaps the most impressive thought of all was the wonderful progress that has been made in the territory that was purchased from France one hundred and one years ago, reaching from the Gulf of Mexico to the Canadian boundary, which was then mostly unexplored, and now is inhabited by 15,000,000 of the most progressive people in the world. The treaty by which the United States acquired this territory from France is most fittingly celebrated by the Louisiana Purchase Exposition, the greatest international show yet held.

As to White and Whole Flour Bread.

The investigators into the comparative nutrition values of food stuffs, who have been carrying on their work in Washington, D. C., have come to the conclusion, which will surprise most, that, weight for weight, white bread is more nutritious than whole-meal bread. It is true that chemical analysis shows that the bran which is removed does contain nitrogenous material, and also phosphates. This is where the brown bread enthusiasts stop, somewhat naturally concluding that when the miller takes out the bran he removes the most valuable part of the flour. Laboratory analysis is not the same as that made by the human body, and it is proved conclusively that the digestive apparatus of a man has not the power to utilize the whole wheat all the bran ingredients are rejected. Cattle and sheep, however, can digest this branny material, so the miller is quite right in selling it for stock and reserving only the white portion for bread for man. The experiments seem to prove beyond doubt that the nitrogenous ingredients of the bran escape digestion entirely, and that one pound of pure white flour provides more digestible material than the same amount of whole meal.

Macdonald Institute Opening.

Arrangements have been completed for the formal opening of the Macdonald Institute, Guelph, during the Winter Fair, to be held December 5th, 6th and 7th. Sir William Macdonald; Dr. Mills, former President of the Ontario Agricultural College, and Prof. Robertson, will be the principal speakers. The Women's Institutes Convention will be held in the Institute on the same date, and Mrs. Bertha Dahl Laws, a well-known lecturer from Minnesota, will give a series of addresses.

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The Age of Milk, and its Purity.

In a paper read before the International Congress of Arts and Sciences at the recent St. Louis meeting, Dr. Arthur R. Reynolds, Commissioner of Health of the City of Chicago, pointed out the danger lurking in milk that was allowed to age before its delivery. The subject of his paper was, "Shorten the Time from the Cow to the Baby." Dr. Reynolds said, in part:

"The milk supply of Chicago is produced so near the city that milk could be delivered to the consumer within twelve hours from the time of milking, but at present the largest proportion of this important article of food is from twenty-four to thirty-six hours old before delivery.

"Twelve-hour-old milk is worth very much more, from a dietetic standpoint, than 24-hour-old milk, while 36-hour-old milk not only has little food value, but is positively harmful to the young.

"The time has come when the value of milk must be judged by its age, by the conditions under which it is produced, and by the treatment it receives from the time it leaves the dairy until delivered to the consumer.

"Everyone knows that sour milk is unfit food for the young, but everyone does not know that milk may be unfit for such food many hours before it becomes sour to the taste.

"Before milk is drawn from the udder it is absolutely free from bacteria. Before it has reached the pail from the teat—even under the most cleanly conditions—at least 150 to every teaspoonful will have been caught up from the air. In twenty-four hours, unless checked by cold, these will have increased to 400,000, and in a few hours more they will have multiplied so enormously that the milk will be sour, even to taste.

"Old milk not only starves the young, but it poisons them, causing the excessive mortality among the young, especially during the hot weather, which hastens souring of milk by favoring the growth of the bacteria.

"All milk intended for the use of children should be bottled in the country, immediately after having been thoroughly cooled. The bottles should be put in cases, packed with broken ice, and so shipped to consumers within twelve hours after bottling, and at a temperature below 50 degrees.

"Milk bottled in the city cannot rank with the country-bottled milk, because it is shipped to the city in cans, without being iced, and because

after the cream has risen during the transit, the butter-fat cannot again, without the greatest pains, be thoroughly intermingled with the milk so that each bottle receives its due proportion."

The Sanitary Care of a Separator.

If the mechanical care of a machine is important as affecting its durability, the sanitary care of the machine is doubly so as affecting the purity of the product which passes through it. Milk—one of the best and purest of human foods—is one of the quickest to become unfit for food if it is not kept clean and handled in clean vessels. While the purchaser of a separator has been again and again impressed with the idea that it must be kept in perfect order, the same agent who went to such pains on this point has told him that the parts which come in contact with the milk need not be washed oftener than once a day, and that the cream could be delivered once a week. It would be one of the greatest blessings to the dairyman, the creamery man, and the consumer of butter, if the machine should go to pieces in a month if not kept scrupulously clean every minute of the time. It is right here that the advantage of the hand-separator to the farmer may turn to naught unless the fact that cleanliness, which is so essential to purity of product and to profit in the business, is thoroughly impressed upon the user. It is not enough to rinse the machine out with a little warm water and let it stand until next time. It is the slime and solid particles of unclean matter in the milk that are caught and held in the bowl. The temperature is just right to set this material to decaying at once; and if the parts are not clean, an evil smell soon develops. The machine must be well washed after every separation of milk.

There are some things that the average housewife needs to learn about washing vessels that come in contact with milk. The dishcloth as found in the average kitchen should never be used on dairy utensils. It is the exception where one will be found to smell sweet an hour after it has been used; and yet milk utensils are often washed with it and wiped with a towel that has done duty on all of the china and glassware of the household, and possibly the pots and kettles, before the tinware of the separator is touched. Discard the dishcloth and the dish towel when the milk utensils are being washed. Wash them in warm water first, with plenty of some washing compound, and use a brush to do the work, but never a rag. Get into every part of them, after which rinse off with clean, warm water, and then either put them in boiling water or pour boiling water over them. Stand the parts up so that they will drain, and use no cloth to wipe them. The hot surface will dry them quickly, and they will be clean. Leave the parts in a sunshiny place if possible. This may seem to be putting too much stress on the case, but evidence gathered in the field shows the need of some vigorous words along this line. The outside of the frame, which does not come in direct contact with the milk, needs the same scrupulous care. Cases have been noted where the color of the machine could scarcely be distinguished because of the grease and dirt or dried milk covering the paint. Pure cream could hardly be expected ever to come from such a place. It is pleasant to know that at more than three-fourths of the farms visited the separators were well kept and the people were trying to do the best they knew how. There was, however, a great lack of knowledge, and this should be supplied to the users of separators in some way or another. It is hoped that this bulletin may do something in that line.—[U. S. Bulletin.

Make the Poor Milker Milk.

A Dutchman once when asked why he did not sell his poor-milking cow and buy a good one replied: "Me feed mine poor good until she make money enough, then me buy ein good cow."

There was more truth than fiction in this frugal old Hollander's theory, for the man who feeds his cow well is the only man who makes any money. There are men to-day who are chasing after pure food who don't know how to feed it when they get it, and there are others who have only poor grade cows who understand the practical art of feeding in such a way as to bring results. It's the latter individual who needs to take a greater interest in becoming familiar with those characters of animal form and individuality that go with good milkers. He is doing very well with what he has, but he should weed out the poor milkers and get in something that will produce. The cow with milk-producing propensities when in the hands of the good feeder is the one that gives profits. If your cows are not up to the mark, either sell them at once and get better, or feed them well until they make enough profit to permit the purchase of cows that are worth more in the open market. It will mean more profitable dairying.