

THE WORLD'S FAIR OF 1878.

The latest notes of the progress of the Paris universal exposition of 1878 we find in the Polytechnic Review, translated from a French paper: While the East is aflame with the fires of war, France steadily continues in preparing the pacific work which is intended to render illustrations the year 1878. The work of the exposition advances with rapid strides. The Teocadero, despite the delay caused by too lightly conceived plans, has risen above the first story in six weeks the general commissioner, whose energy has repaired the errors of his lieutenants, will have all the floor timbers and rafters in position; the iron framing has been accorded to the house of July, of Argentan.

HOW COFFEE IS ADULTERATED.

Professor S. P. Sharples, the State Assayer of Massachusetts, is making some analyses of articles of food, which are resulting in interesting disclosures. Package coffee has engaged his attention, but he has found very few traces of the berry itself. The following are some of the results of his examination:

"Hayward and Co.'s French breakfast coffee," the label of which sets forth that only three-quarters as much of it need be used as would be required if ordinary coffee was employed, is found to contain no coffee at all, but to be made of green peas, burned molasses and "an occasional grain of rye."

A package of "Pure roasted and ground Cape coffee" was found to be made wholly of peas and nutshells, the latter floating when the mixture was put into water.

A package of "Kimball's first quality Mocha

the grains. Pure coffee will float and scarcely color the water. Beans and chicory sink to the bottom. Chicory colors the water at once, beans more slowly. Test the part that floats by chewing it. Coffee will thus be recognized by its taste. Nut shells, which also float, are hard and brittle. A species of nut which has lately come into use strongly resembles coffee when ground up, by floating on the water as well as by its feeling between the teeth; but the difference can easily be detected, because the adulterating ingredient is nearly tasteless. After subjecting the suspected article to the above test spread some of it on a sheet of paper and examine it carefully for grains of rye, oats and peas. The pea ingredient will frequently be found in pieces one-eighth the size of a pea and the rye in half grains. Chicory is tough when taken between the teeth and has a bitter taste, different from the bitter of coffee.

Another article which has been looked into is

THE NORMAN HORSE.

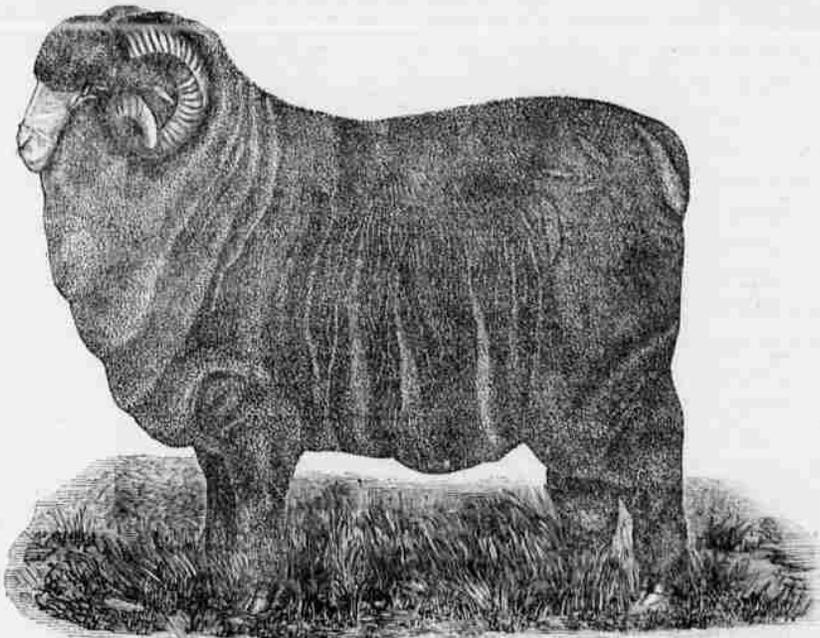
We give on this page a fine engraving of an imported Norman stallion. This valuable breed of heavy horses has been before our coast farmers for several years, and the results from breeding them upon the common stock has greatly improved the work horses in some parts of the State. The Norman horse is of noble origin, and in connection with the Clydesdale and English draft horse has accomplished the improvement of stock to which we have alluded. The breeders of the Normans claim for their valuable animals a share in the success which the French armies won under Napoleon Bonaparte. We find the following in a book upon the Norman horse: "Never in the world were horses called upon to endure such hardships as were the horses in Napoleon's army. No other horses in the world but Norman French horses would have taken Napoleon's artillery and baggage across the Alps at the time that he invaded Russia. It is almost incredible to believe that any of them could have ever got back to French soil again. The fact that there cannot be found anywhere in the world another family of horses all possessing the same general form, with such great power of transmitting their progeny all their characteristics, is proof enough that they are a pure and distinct breed, the result of hundreds of years of careful breeding. The native horses of every other country in the world except Normandy, so far as we have a knowledge of them, are universally small horses."

MERINO SHEEP.

There are two breeds of fine wools that stand "head and horns" over all others. These are the Merino and the Saxony. The former are undoubtedly the best breed of fine-wooled sheep in the world. For many years they have been the favorite breed among New England growers of fine wools, and, taking into consideration the size of the animal, weight and quality of the fleece, and value for mutton, there is no other that can compare with it for the Pacific coast grower.

The Saxony produces a finer wool, but it is not in such general demand, and the animal is diminutive in size, and where crossed with the pure Merino has invariably proved detrimental to the latter. It might succeed better here than in the more rigorous Eastern climate, but they are nowhere so vigorous as the Merino, either with reference to vicissitudes of climate or capacity to travel or work for a living.

A LEGAL QUESTION.—A rather complicated case is about to come before the courts at Frankfurt-on-the-Oder. A lively young boar was recently sent there by rail from Castrin, carefully shut up in a wooden cage. On the journey, however, he managed to break his prison, and devoured no less than 25 pounds of German yeast, which happened to be in the same carriage. The condition of the misguided pig, when the yeast began to rise, may be imagined. He was quite unable to bear his suddenly-acquired greatness, and gave up the ghost in a multitude of sighs, which is quite explainable under the circumstances. But now the question is, who is to pay the damage for that? The railway company repudiate all responsibility. Is the owner of the carcass to proceed against the owner of the yeast for the loss of his boar, or is the ex-proprietor of the yeast to proceed against the owner of the pig for the loss of his merchandise? Eminent counsel hold that the claim of both parties lies against the constructor of the cage; but the builder contends that the cage was never calculated to withstand the frantic efforts of a pig stung into frenzy by the temptation of 25 pounds of yeast placed under his nose.



MERINO RAM.

are charged with the metallic covering, the house of Oull, Crenot, the factory of Fives-Lille, MM. Eiffel et Cie, have erected their trestle work and their rolling scaffolds. These four houses are superintending the construction of the four great galleries which unite two and two the pavilions at the angles, their framing and platform are mounted on wheels and placed on car tracks so that they can be readily moved along as the work progresses. Besides this work, all the underground water and gas pipes, ventilating flues, etc., are in position.

The question of the bridge of Joux has been settled very simply by an enlargement obtained by the help of metallic brackets; the execution of this work is intrusted to the house of July, as is also the construction of the bridges at the Billy and Oisy wharves. The greatest animation reigns in the timber yard, and it is well that it is so, for it is absolutely necessary that the work should be pushed forward as rapidly as possible, for it is already feared that the buildings now under way will be insufficient to accommodate all requirements. For group six (implements and products of the mechanic industries) a covered annex of 25,000 meters in length has been constructed on Bourdonnais avenue on the bank of the Seine, and on the Billy wharf. These constructions should effectually silence those who have been constantly predicting the non-completion of the buildings in time for the opening of the exhibition. The people have responded most enthusiastically to the appeal of the government. The demand for space, in the French section, not comprising the fine arts and agriculture, exceeds 26,000, and in group six, before referred to, exceeds 112,000 meters, of which the administration can supply but 38,000, which will be filled with the most choice of the national industries.

and Java coffee" also contained no coffee at all, but was made of peas and rye.

"Glimmer's extra quality French coffee" was almost destitute of any foreign solut ions, peas and rye predominating, with a new odor.

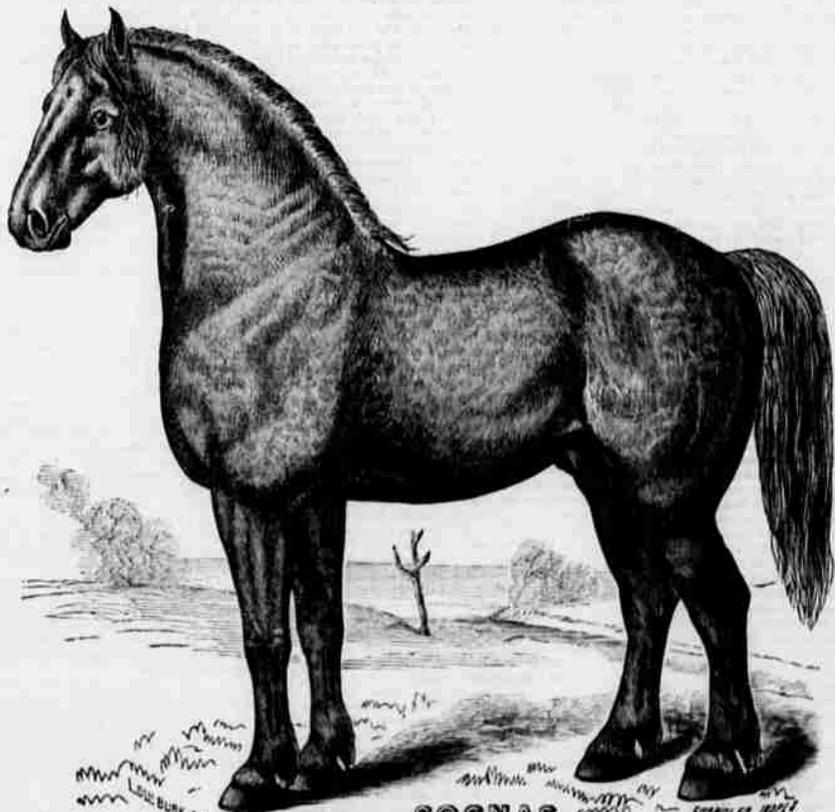
"Chase's English breakfast coffee" is a large consumer of peas, the traces of coffee being so slight that the assayer pronounced them accidental. Happily the analyses have not disclosed the presence of any positively injurious substance, and if people who can easily find out the cost of a pound of green coffee, except to buy a like quantity roasted and ground for half the price, they deserve to drink weak pea soup. For detecting adulterations the following rules are given:

Take some cold water in a glass and throw upon it about half a tea-spoonful of the coffee to be tested, stirring it around so as to wet

cream of tartar in packages. Much of it contains no cream of tartar at all, but is composed of soft phosphaie of lime, starch and gypsum.

As to the roasted peas and rye which are sold instead of coffee, it is pretty certain that they are more wholesome than the fruit of the coffee plant, being destitute of any narcotic quality; but the thing is a fraud, and it would be better for families—cheaper at least—to roast their own peas and make their own weak pea soup. As to chicory, it is well known that all the coffee served to customers is largely adulterated with the roasted root of that plant, which is cultivated for that purpose.

This loss in the valuation of real estate and personal property in Boston, compared with last year, will reach \$60,000,000.



COGNAC

TESTS FOR BEESWAX.—At a recent meeting of a German chemical society, Herr C. Schmidt, after having called the attention of the society to the frequent adulteration of beeswax with resin, described a modification of the so-called Donath's method of detecting the presence of such adulterating compounds, viz: Five grains of the beeswax to be examined is placed in a vessel with five times its bulk of nitric acid (sp. gr. 1.32 to 1.33) and heated to a boiling point, and permitted to remain at this temperature for a moment; an equal volume of cold water and sufficient ammonia to give it a marked ammoniacal odor is then added. If this alkaline solution contains but pure wax, it will be of a yellow color; while if resin be present it will, on account of the nitrogen compounds formed, be of a more or less intense reddish-brown color. Since this test is a colorimetric one, it is well to prepare a solution with chemically pure wax to be kept as a standard.

SUGAR BEETS IN THE EAST.—There is just now renewed interest in the question of best sugar production in the East. The subject is being agitated in Massachusetts, and we learn from a personal letter that a company is being organized for experiment in Philadelphia.

THE FAMINE DISTRICT IN BRITISH INDIA is daily doing better. Rain has fallen plentifully and sowing has begun. The position in Madras is still grave, and over 1,000,000 persons are fed by relief works.