What Science Is Doing

SORGHUM SUGAR

A method of getting as much sugar from sorghum as from average Louisiana cane, with valuable by-products as well, is the invention of two U.S. Department of Agriculture chemists, who have assigned their rights to the Secretary of Agriculture, without payment of royalties to themselves.

Syrup and a sweet silage have been obtained from sorghum for years, Science Service explains, but the sugar contained could not be efficiently and economically crystallized out by the usual methods of boiling in a vacuum pan and then centrifuging, because of the formation of "gums".

These gums, the inventors found, were composed principally of starch and alkaline earth salts, the latter principally calcium with some magnesium. They made the syrup too viscous when boiled down. The inventors' process removes these impurities and recovers starch and calcium and actonitic acid as valuable by-products.

The syrup can then be easily reduced to sugar by the usual processes.

Sugar cane requires two years to mature and needs therefore a climate free from killing frosts in the winter. Sorghum, on the other hand, can be planted in the spring and harvested in the autumn. It grows over large sections of the country and does well in the dry areas.

New War Plant To Dwarf Others

Chrysler Co. Plans Largest Industrial Building In The World.

Adolf Hitler, who long boasted of Germany's war production facilities, may feel a twinge of pain in his heart, head or both when he hears of the Chrysler Corporation's plans for building a new war plant that will utterly dwarf the largest industrial building in the world, according to The Buffalo Courier-Express.

The new plant is important, not only for the mass of war materials that will come out of it when it gets into production, but also for the large amount of vital materials that will not go into its construction.

* * *

Chrysler engineers, together with Albert Kahn, industrial architect, have evolved a revolutionary type of factory design which requires only 2.7 ounds of steel per square foot of floor area instead of five to twelve pounds generally used in conventional structures.

"The saving on steel will be enough to build fourteen destroyers or six 10,000-ton cargo ships," the announcement said.

Production potentialities of the new plant may be gauged from the statement that the plant will be big enough to put the Ford Willow Run bomber plant inside and still leave enough room for twenty ball diamonds around the edge. The fence around the plant will be almost four miles long.

* * *

Apparently it was the steel-saving features of the new plant that enabled the corporation to get the green light from the government for its building. Work on the plant, to be located in the Middle West, will be begun in a few days. But its exact location and the type of war materials to be produced were not announced.

The construction of this plant should help to quell the fears of those who believed that America's large existing production facilities are not sufficient to compete with those of the Reich. And the announcement eggs on the imagination to wonder what the dimensions of future war plants are likely to be.

There are four birds whose wings are too small for flying: cassoway, emu, kiwi and ostrich.

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For All Deformities

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TRUSSES

CLERK GRADUATES TO C. P. AIRLINES

The magnaflux crack detector is a vital piece of machinery for the checking of engine parts. Miss Marjorie Sutton operates the machine which pours a flow of oil and iron filings over the magnetized engine part. Where the material has for any reason cracked or is faulty, the magnetism will draw the iron fillings into a line. Thus many a faulty part with cracks too small for the human eye to see has been discarded. Had the faulty part been used it might have given way in flight causing a crash and perhaps death. Miss Sutton was a clerk in a department store before she came to the aircraft engine overhaul plant operated by the Canadian Pacific Airlines.

Many of the Canadian women who have stepped into the places of men in the factories and plants throughout Canada have come straight from school and many others have left jobs in offices and stores to exchange typewriters, filing cabinets and cash registers for wrenches, screwdrivers and gauges of various kinds in their desire to be of more use in Canada's war effort. They have thus been able to release able-bodied men for service in the forces in ever-increasing numbers.

Gun plants, explosive factories and aircraft plants have all found many tasks to which their nimble fingers are adapted. Several of the aircraft plants operated by the Canadian Pacific Airlines have girls, many of them in their late teens and early twenties, sewing fabric on wings, painting superstructures, doaping wings, installing instruments, building the fusilage and doing the thousand and one things that have to be done in constructing the aircraft that one day will drive Hitler and his gang from the face of the earth.

Even in the aircraft engine overhaul plants which the Canadian Pacific Airlines operate, women find their place. Girls are testing spring tension, checking engine parts, dismantling and cleaning carburetors, cleaning and testing spark plugs and doing many of the jobs, under the eye of experts, which men formerly did.

The strange part of it all is that they like it. Few of them want to go back to selling hats, office work, or dispensing "Pink Pills" over a drug store counter, and all are heart and soul in their work doing their best to help in the best way they can to beat the Rome-Berlin-Tokyo gangsters.

Lucky Shot

All available arms were put into use (at Pearl Harbor, Dec. 7). A country lad from the west had a standard rifle shoved in his hand, says Blake Clark in "Remember Pearl Harbor."

"Get out and shoot!" was the command.

The boy had not been trained to handle a heavy rifle, but he had done lots of hunting in his day. He drew a bead on a small dive bomber coming in, and fired.

One of the freak accidents of the war occurred.

Apparently his bullet hit the detonator of the bomb the Japanese was about to drop, for the 'plane burst in mid-air.

The boy fainted.

HOW CAN I?

Q. How can I paint on glass surfaces?

A. Be sure that the glass is absolutely clean of grease. This is accomplished by washing with benzine or alcohol. Allow to dry thoroughly before applying first coat of paint. A straight white lead-linseed oil paint containing some turpentine is a satisfactory first coat. Over this may be applied the desired color of paint.

Q. How can I prepare a good summer fruit drink?

A. Use the following ingredients: sliced ripe bananas, canned grapefruit and juice, white "pillow" candy mints, slightly crushed. Pile in sherbet glasses. Chill. Garnish with a sprig of mint or green cherry.

Q. How can I mend a leaky vase?

A. Take some melted paraffin and pour it into the vase and allow to harden over the spot where the leak occurs. It will not leak again.

Q. How can I remove light scratches on furniture?

A. By rubbing over them with boiled linseed oil, turpentine and white vinegar, mixed in equal proportions. For the deeper scratches, use a paste made of thick mucilage mixed with coloring matter to blend with the furniture. For oak, use burnt umber and raw sienna; for mahogany, Venetian red; for walnut, burnt umber and Vandyke brown.

Modern Etiquette

1. What is something one should always avoid saying in a letter?

2. Is it the duty of everyone who was invited to a wedding to call on the bride after she returns from her honeymoon?

3. When there is some item on the menu which one does not understand, is it all right to ask the waiter what it is?

4. Should one ever sip coffee, tea or water at the table while food is in the mouth?

5. If a man offes to shake hands with a woman upon being intoduced, does she ignore the gesture?

6. Is it proper for one to use a telephone to acknowledge receipt of a gift?

ANSWERS

1. Avoid writing "There isn't any news; everything is going along in just about the usual fashion." This is very dull, stupid, and uninteresting and is a waste of both the writer's and the reader's time and energy. There is always something about which to write, and the observant person with an active mind has no trouble in this respect.

2. Yes.

3. Yes. Only a timid person would hesitate to do so.

4. No, the food should be swallowed before taking the liquid.

5. While the woman is within her social rights to ignore the man's attempt to shake hands, still, no one with the least spark of good breeding would wish to do anthing to hurt the feelings of another. She should, therefore, respond to the man's offer to shake hands.

6. No, it is not good form.

You GIRLS WHO SUFFER DYSMENORRHEA

If you suffer monthly cramps, backache, distress of "irregularities," nervousness—due to functional monthly disturbances—try Lydia E. Pinkham's Vegetable Compound Tablets (with added iron). Made *especially for women*. They also help build up red blood. Made in Canada.

Have You Heard?

The instructor was seeking recruits for the regimental band, and approaching Private Brown he inquired:

"Do you play a musical instrument?"

"Yes," replied Brown, "but only at home."

"Really," said the instructor "and what instrument do you play?"

"Second fiddle," retorted Pte. Brown.

"Some busybody has told my wife that I took you to a dance the other night," said the manager to his secretary.

"Well, what about it?" asked the girl.

"That makes you my former secretary."

Two Negoes were discussing their chances of being drafted.

"Taint gwine to do 'em no good to pick on me," said Sam, "cause I ain't gwine to do no fightin'! Ah ain't lost nothing in dem countries, an' dey can't make me fight."

"You may be right," replied Mose, "Uncle Sam can't make you all fight but he can take yo' where de fightin' is an' den yo' use yo' own judgment."

The young reporter was told over and over again to cut his story to the bare essentials. So his next story came out this way:

"J. Smith looked up the shaft at the Wallick Hotel this morning to see if the lift was on its way down. It was. Aged 45."

The lorry driver was unfortunate enough to run his vehicle into a house where a woman stood baking. Having lost his nerve, he did not know what to say, and blurted out:

"Can you tell me the way to Birmingham?"

"I can," replied the woman. "Straight past that sideboard and then turn left at the piano."

"I'm not half good enough for you."

"Why, Bill, you talk just like one of my own family."

Laborer: "I dug this hole where I was told to, and began to put the dirt back like I was supposed to. But all the dirt won't go in. What'll I do?"

The supervisor pondered, and then said: "I have it. There's only one thing to do. You'll have to dig the hole deeper."

Seeing her former suitor at a party, a girl decided to snub him.

"So sorry," she murmured when the hostess introduced him, "but I didn't get your name."

"I know you didn't," said the unabashed man, "but you certainly tried hard enough."

King Of Belgium Lives As Prisoner

King Leopold of the Belgians is still a voluntary prisoner in his castle of Laeken. Travelers from Brussels say Leopold has made his life as simple as he can. He respects the rationing strictly, using food tickets like the rest of his subjects. He virtually never receives visitors, as he insists that he considers himself as a prisoner of war.

C.N.R. Can Handle Increased Traffic

Although the Canadian railways are moving the largest volume of traffic in their history, they can handle more freight business without diffi ulty, stated R. C. Vaughan, President, Canadian National Railways, recently. Using the yardstick of the Canadian National increase in business, Mr. Vaughan stated that the general increase in the volume of business now being handled is approximately 20 per cent. more than in the peak year of 1928, and more than 75 per cent. greater than that handled by the railways during the peak year of the last world war. "Not only can we take more traffic and move it quickly and efficiently today," he added, "but we can do it with proportionately less expense than we did in 1928."

Freight Traffic

Mr. Vaughan pointed out that never before had the railways been so effectively organized to move large volumes of traffic. "We are doing a tremendous thing as Canada's biggest war industry," he said, "and we are geared to the highest of speed." He pointed out that new yards had sprung up throughout the system, special traffic controls, and storage yards, where goods are assembled to await telegraphic orders to be loaded and rushed to whatever sea-port determined. "These are but a few of the improvements in the science of modern railroading," he added. "Heavier motive power has made it possible to operate fast, through freight trains and to increase the size of the loads carried. In fact, it might be said that today we virtually begin the number of freight cars hauled, where in the last war the peak of loads finished. In 1918, a long freight train was between 50 and 60 cars; in this war, our trains frequently begin at 60 cars and run as high as 90 loaded cars, or more; and there has been no evidence whatever of congestion in our operation to the seaboards."

Passenger Traffic

Passenger traffic, Mr. Vaughan stated, was proportionally heavy. He said that not only were there heavy demands made upon the railways for troop movements of the various services, but apart from that there were "industrial" chartered trains, operated daily, to carry munitions workers to plants located outside cities and towns. He intimated that at present, the National System had more than 100 coaches assigned solely to this service. Apart from these special demands upon the railways, there was a tremendous increase in general passenger traffic.

C.N.R. War Effort

Mr. Vaughan added that the Canadian National Railways were doing a fine work in the production of war materials, as well as in the moving of them. He pointed out that Canadian National shops were making naval guns and other war devices of which he could not speak. Several mine sweepers had been built, as well as a number of 10,000-ton cargo boats. The company also had charge of operation for the Government, a fleet of merchant ships, which had been acquired from time to time from other powers, both neutral and otherwise. Many key-men have been loaned to various government services, and more than 7,000 railway men were on active service with the Canadian forces.

20,000,000 Mexicans Join United Nations

Mexico's entry into the war will line up nearly 20,000,000 more persons against the Axis and boost the Western Hemisphere total to 179,936,374, according to figures in the 1942 World Almanac.

The Mexican population—19,478,791—is second only to the United States total of 131,669,275 among the twelve New World nations warring against Germany, Italy and Japan.

The others and their populations are: Canada, 11,422,000; Cuba, 4,228,000; Guatemala, 3,248,000; Haiti, 3,000,000; Nicaragua, 1,380,287; Panama, 467,459; Costa Rica, 616,000; El Salvador, 1,704,497; Honduras, 1,105,534 and Dominican Republic, 1,616,561.

There are about 3,000 men in United States camps for conscientious objectors.

Employer (interviewing an applicant for job): "Know anything about electricity?"

"Yes, sir."

"What's an armature?"

"A chap who boxes for nothin'."

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ISSUE 25—'42

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FOR SALE, GENERAL STORE, small village, County Bruce, reason health. Apply F. A. Gibson, Real Estate, Paisley, Ontario.

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FOR SALE — SEVEN COWS, EXcellent milkers, with first or second calf at foot, also Diesel Tractor, large Letz Combination Feed Mill, other good used machinery, also 1935 stake body International Truck. S. A. Lister, 58-60 Stewart Street, articles can be seen at R.R. No. 1 Oakville, Dundas Highway, West of Trafalgar.

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