

## Wonderful Possibilities of the Beet Sugar Industry.

The Beet Sugar Gazette for July a strong magazine devoted to the American sugar industry, has the following article. It will be read with interest in Utah, where the circle of those who are interested in the beet sugar industry, both as investors and beet growers, is constantly widening.

If the beet sugar industry takes gigantic strides forward in the next few years and forever after, if our farmers find a new and lucrative crop, if work is provided for tens of thousands of idle hands, if hundreds of millions of dollars of capital are made productive, if a hundred million dollars annually are saved to this nation, no one man will deserve more credit for bringing about such a consummation devoutly to be wished than the Hon. James Wilson, the United States secretary of agriculture. Mr. Wilson is tireless in his efforts to promote this industry, and is using the tremendous influence of his great department where it will do the most good. He neglects no opportunity to attract public attention to its possibilities.

On June 19 the Chicago Tribune published the following interview with Secretary Wilson:

"I may be over-optimistic, but I believe my judgment is correct. Any one of the States of Illinois, Indiana, Iowa, or Nebraska could produce from beets all the sugar needed in the United States."

The secretary of agriculture is extremely enthusiastic over the ability of this country to produce all the sugar it needs, and at the same time enrich the farmers who engage in this industry. When asked today why more beet sugar was not produced he said: "Over forty factories will be at work this fall, many with increased capacity. The principles now applied to this industry have heretofore been used in the production of oil. At Lehi, Utah, three new factories have been established, being located twenty, twenty-two, and twenty-three miles apart.

"The juice is gotten out of the beets by diffusion, and it is run in pipes to the central factory. There is activity in the sugar industry from New York to California. There has been a steady growth in those sections during the last four years. But there has been a pause since the discussion of the Porto Rican question began. When that discussion began, capital hesitated to advance money to be invested in the beet sugar industry in this country.

"There is no doubt about the ability of our people to make sugar in competition with any other sugar makers in the world, that is, as soon as we have had time to apply American ingenuity in the fields and factory and to utilize the by-products.

"While in San Francisco I met a few beet sugar producers. I inquired if it had occurred to them to press the water out of the pulp so it might be transported cheaper, and stored with greater facility. This is now being done and before long sugar beet cake will be an article of commerce. The pulp of the

The following figures are taken from the statistical abstract of the United States for 1901:

Total pounds of sugar imported	4,018,066.530
Total pounds of sugar dutiable	3,513,373.425
Value of sugar imported	\$100,259,974.00
Duty collected on sugar imported	\$7,417,722.33
Average cost per pound in foreign countries	2.49
Quantity of sugar consumed in the United States:	
Imported sugar	1,950,014 Tons
Manufactured from imported molasses	7,647
Total imported sugar	1,957,661
Domestic product (cane)	174,450
Domestic product (beet)	82,726
Domestic product (of maple)	5,999
Total tons consumed	2,219,847
An increase in consumption per capita from 30.9 pounds in 1885 to 65.2 pounds in 1900 is noted.	

sugar beet is as valuable to the dairy cow as the entire beet, because the extraction of the sugar leaves everything required by the cow, as it gets the necessary sugar from feeders. I inquired if the test had been made of the value of the by-products in feeding dairy cattle.

"Clara Spreckels is feeding 600 cows with pulp, but this is not being done everywhere. The sugar is taken from the beet and the by-product sold for feeding cheap steers or otherwise wasted. Profits from the industry are expected only from sugar by a large majority. It is more economical to build large factories costing from \$350,000 and upward. We might have begun this industry as they did in Europe by making brown sugar and selling it to refiners. The American idea is to produce the finished product, leaving the operators free from the power of the sugar trusts, that exist solely at the expense of the consumer.

"When the discussion of the Porto Rican question began it was an open question as to whether the sugar producers of this country were to look

eventually for free trade in sugar for the Philippine Islands. They were not averse to anything that might be done in Porto Rico, or any legislation by Congress in regard to Porto Rico. The parties seemed to be divided on the question as to whether Congress had the power to put a duty on Philippine sugar, and capital hesitated to build factories freely until the Supreme Court decided the question. The court has decided that Congress has power to do so.

"Since that decision capital has been moving freely in this direction. Many localities offer large dividends, and all well-managed factories have been paying well. Colorado is having a boom along this line, and so are other localities. Syndicates have bought large tracts of land in the Arkansas Valley, with the purpose of having them settled by people who will grow sugar beets. Northern Illinois, Indiana, Iowa and Nebraska are well located for this industry. But the farmers in those humid states are prospering greatly with staple crops that are common to them. Any one of the states mentioned could produce from beets all the sugar needed in the United States. But the farmer who is prospering in raising cattle, horses, hogs, corn, wheat, oats and barley changes his methods slowly.

"I expect to see a combination of sugar and butter become common on the farms in the sugar belt. The by-product will pay all the expense of raising the crop.

"These crops easily average twelve tons to the acre in the states mentioned, making sugar beets worth \$50 an acre. Sugar and butter are composed of car-

bonaceous matter, which comes from the atmosphere and does not deplete the soil of its plant food, providing the refuse from the cow stables is returned to the soil.

"I may be over-optimistic, as I said, but I believe within ten years the United States will produce all of its own sugar, principally from sugar beets. From 5,000 to 4,000 acres devoted to beet raising will justify the building of a factory. This requires co-operation on the part of the farmers, as there are few farms large enough to be devoted exclusively to the raising of beets. We are still sending imported sugar beets all over the country, so that the farmers may test the soils in every neighborhood. Now that the constitutional question is out of the way, capital will have less hesitation about advancing money for building factories.

"The farmers themselves could build factories, but this is a new business and they hesitate to embark upon it. The requirements of a neighborhood are that enough acres be planted and cultivated to justify the erection of a factory. There must be cheap fuel, limestone must be within reasonable reach, and pure water obtainable.

"A tremendous impetus would be given to a dairy neighborhood by each farmer growing enough sugar beets to give him pulp enough to feed his dairy cows. He would then not be put to the expense of buying mill feed, oil cake, bran, glucose factory meal, and would thus make the neighborhood independent of mills located long distances away. When once this combination is brought about it will continue.

"The farmer by pressing the water out of the pulp would be able to put it up in a crib as he does oil cake, to be fed to the dairy cows in the winter as required. The by-products should belong to the farmer, who grows the beets. He should sell only the sugar to the factory.

"Our people will learn when they engage in this work more extensively than they have already done that a complete system of rotation of crops will be wise. The intensive culture necessary to best growing will thoroughly clean the land of weeds of every kind. The farmers will learn that beets should not be grown on the same field oftener than once in four years. Between the growing of the two crops of beets each crop as clover, cow peas, or vetches should intervene, to store the soil with nitrogen. The tops of the beets should be left on the ground and plowed under, as they contain a large percentage of mineral plant food. It has been ascertained by careful experiments in the states mentioned that all of them produce beets sufficiently rich in sugar to justify the enterprise. The arid states have the richest beets because of the richness of the soil. The plant food has not been leached out of it by rainfall. In some parts of Colorado there is produced 15 or 16 per cent of sugar in beets, with a high percentage of purity of juice. The European beet sugar neighborhoods are content with 12 per cent, and work beets profitably with only 10 per cent. I do not know of any states along our northern border which have lower averages than 12 per cent.

### "THE AMERICAN INVADERS."

Their Plans, Tactics and Progress—The Infinitely Little  
—By Fred A. McKenzie in London Daily Mail.

The American invasion, while a reproach to the activity of our manufacturers, is often a boon to us as consumers.

Nowhere is this more strikingly seen than in domestic life. Most of the inventions that have tended in recent years to simplify the labors of the housewife have come from America. There servants are scarce, independent, and dear. Even before Mr. Sheldon started his recent crusade, they did not forget to tell you, "I am a lady and expect to be treated as such." Rather than stand the ways of the "hired girl," most American housewives, of the same standing as those who would here be at least two maids, have elected to take the advice of sturdy old William Cobbett and do without servants altogether.

This has led to the multiplication of all kinds of devices to save household labor, devices which have gradually been introduced here, to the great comfort of the women folk. The American sewing machine might once have been quoted as a case in point, but though we still import a million dollars' worth of machines each year, the Germans have so taken this up that it can no longer be looked on as a peculiarly American. Darning machines, patching apparatus, and a hundred and one other "necessaries" now belong to this class. Automatic carpet sweepers are worth mention. It took long to popularize them here. Our housewives would not realize for some time that with a carpet sweeper they can do in five minutes, without dust, the same work that would take them thirty minutes with a broom and fill the room with dust. At first, too, carpet sweepers were dear. But in time prices were reduced, and the sweeps spread, no housekeeper who once used the sweep ever thinking of replacing it by the broom. During the past three years the American carpet sweepers have sold here by tens of thousands, and every year this sale increases. The business will be a permanent one, for sweeps, like ordinary

brooms, want frequent renewal. We buy nearly a quarter of all the American brooms and brushes sent abroad.

MEDICINES.

In domestic medicine the invaders have inflicted pecuniary loss on both doctors and chemists, not to speak of wholesale drug manufacturers. The Americans have exploited the medicine trade, both legitimate and quick, in the most thorough fashion. We spend \$24,000 a week on American patent medicines. The whole of the rest of Europe together does not spend \$500.

On this let me quote a talk I had with a busy London chemist. "I have seen the rapid spread of American drugs in our business," said he. "In my own case, about half the medicines I sell are American, and a considerable proportion of the remainder German. But my proportion is larger than the average, as there are many American visitors in this part of London. Taking the trade as a whole, I should say that one third is in American lines.

"Why is this? Simply because the Americans are right up to date, while our own manufacturers seem to be asleep. They provide the things wanted in such a convenient form that the older preparations stand no chance beside them. Here, for instance, is a box—and he showed me a little fat leather pocket-case—containing all the ordinary medicines and ointments that a traveler in uncivilized lands wants, done up in tabloid form. It only takes up a few inches of room. The old-fashioned English medicine case, containing the same preparations in liquid form, was quite a load. Here is another little leather case, for a doctor to put in front of his bicycle. All of these are American; I sell large numbers of them. If I wished, I could not sell similar English goods in their place, for there are none.

"In new preparations the Germans have rather got the lead, but for drugs, on the whole, the Americans come first. We did not welcome their arrival. For us the profit on a bottle of tablets is much smaller than it would be on the ordinary mixture. The only benefit we have is the saving of time taken in preparation. Doctors were still more opposed to tablets, for they take the whole mystery from medicine and enable a patient to dabble in drugging

### PRESIDENT GOMPERS RAPIDLY RECOVERING.



SAMUEL GOMPERS, president of the American Federation of Labor, and who was seriously injured by a fall from a trolley car is showing marked improvement. His physicians pronounce him now out of danger and making good headway.

himself. But they have come in spite of us, and they are here to stay."

UNDER FALSE PRETENCES.

Of household foods, corn, canned meat, and tinned fruits which come to us from America, it is hardly necessary here to speak. The coming of these is no new thing, and enormous as are the quantities of foodstuffs sent to us across the Atlantic we can have no hope of improvement until our farmers are Americanized. But it may be news to some that many of the so-called English foodstuffs which are sold as home produce are wholly American-made. I do not state this on my own authority, but on the word of the American consuls, who have repeatedly complained in their official reports of the great amounts of canned goods sent unmarked from the States and here decorated with English labels.

In domestic furniture the invasion has not yet really begun. American manufacturers have been too busy up to now supplying their own market, save in expensive office goods. But the English cheap furniture market is waiting for the first progressive house that chooses to annex it. Here our furniture is largely made by hand by "little masters" in Shoreditch and Bethnal-green. Every middle-class and working-class housewife can tell of the rubbish, shabby-looking but rotten, now sold.

ENGLISH AWAKENING.

Contrast this stuff with the cheaper, finer-made, and more durable goods sold all through America and in Northern Germany. These goods, machine-made in great factories on a large scale, would as surely win the day here as American desks have swept away the old heavy British desks. But here the English traders are at last stirring. News reaches me that one English company is now erecting a big factory in North London, and is importing a large amount of up-to-date American electrically driven wood-working machinery. It is going to adopt American methods, and if it manages to avoid trouble with workmen it is very serious point in any attempted improvement in the English furniture trade. It should score a real success. This is only one of many signs that we are learning to use our rivals' own weapons against themselves, and that in the end the invasion may prove in some ways a blessing in disguise.

Once the English watch and clock and instrument maker was one of the most skilled handicraftsmen in the world.

### MOON AND WEATHER ACT TOGETHER.

Mary Proctor, Daughter of the Famous Astronomer, Writes Entertainingly of an Old Popular Superstition.

Sometimes she is girdled round by halos, Now three, now two, and now by only one.

A single halo portends wind or calm— Wind, rudely broken; slowly fading, calm.

Two whorls of halo prophesy a storm; Three whorls a greater; the most furious blasts

A shattered halo of three dusky whorls. Such every month the warnings of the moon.

"Weather Forecasts," Aratus.

A belief prevails that the moon's phases and changes have a controlling influence over the weather, and the remarkable change that actually took place on April 25, when the moon entered first quarter, seemed a confirmation of this theory. The rain had poured incessantly day after day, and now the clouds vanish, the blue sky becomes visible, and the light of the sun once more brightens this region of our planet. Surely the moon had something to do with the transformation that has taken place, but so great an authority as Professor C. A. Young, of Princeton, assures us that the moon has absolutely nothing to do with the weather.

Such a belief is in the strict sense of the word a superstition—"mere survival from a past credulity. It is quite certain that if there is any influence at all of the sort it is extremely slight—so slight that it cannot be demonstrated with certainty, although numerous investigations have been made expressly for the purpose of detecting it. We have never been able to ascertain, for instance, with certainty whether it is warmer or not on a less cloudy or not at the time of the full moon. Different investigations have led to contradictory results.

"As to the supposed connection between 'change of the moon' and changes of the weather, it should be enough to note that even within the United States the weather changes are not simultaneous (in Kansas and Maine for instance), as they should be if they were due to the changing phases of the moon. Since, however, a change of the moon occurs every week, every weather change must necessarily occur within about three days and a half of lunar change and half of them ought to fall within about forty-five hours, even if perfectly independent.

"Now it requires only a very slight prepossession in favor of a belief in the effectiveness of the moon's changes to make one forget a few of the weather changes that occur too far from the proper time. Coincidences enough can easily be found to justify a pre-existing belief."

From a very remote antiquity, in the twilight of natural astrology, a belief arose that changes in the weather were occasioned by the moon. That the belief exists is clear to anyone who is acquainted with current literature and common folk lore. In fact, it must be admitted that even intelligent and well-informed people have been known to accept the theory.

The idea that the weather is affected by the changes in the moon is still held with great vigor in England, and one of our proverbial sayings is, "So many days old the moon is on Michaelmas day, so many floods after." If it rains on St. Swithin's day we are told to expect rain for forty days after. An equally wise prediction is that if Christmas comes during a waxing moon we shall have a very good year, and the nearer to the new moon the better, but if during a waning moon a hard year, and the nearer the end of the moon so much the worse.

Another belief is that the condition of the weather depends upon the day of the week on which the new moon chances to fall. New moon on Monday, or moon day, is everywhere held as a sign of good weather. Friday's new moon is much disliked, while Saturday is unlucky for the new and Sunday for the full moon. According to the old English weather saw—

Saturday's new and Sunday's full Never was good and never well.

In Scotland the farmers believe that a misty moon is a misfortune, and an agricultural maxim among them teaches that—

If the moon shows like a silver shield

You need not be afraid to reap your field, But if she rises halloed round Soon we'll tread on deluged ground.

Two rules of the shepherd of Banbury are: If mist's in the new moon, rain in the old; If mist's in the old, rain in the new moon.

Another weather guide connected with the moon is that to see "the old moon" the arms of the new moon" is reckoned a sign of fair weather, and so is the turning up of the horns of the new moon. In this position it is supposed to retain the water which is imagined to be in it, and which would run off if the horns were turned down.

On this novel idea of a lunar basin or saucer Southey writes from "Kew- Wick, Dec. 29, 1823," as follows: "Poor Littlehead has this day explained the cause of our late rains, which have prevailed for the last six months, by a theory which will probably be as new to you as it is to me. 'I have observed,' he says, 'that when the moon is turned upward we have fine weather after it, but if it is turned downward then we have a wet season. The reason is that when it is turned down it holds no water, like an inverted basin, and then down the rain comes.'

Regarding which observation Southey remarks: "It will be a long time before the march of intellect shall produce a theory as original as this, which I find upon inquiry to be the popular opinion here." George Eliot refers to the same fancy in her account of the burial of "poor old Thias Bede."

They'll ha' putten Thias Bede i' the ground afore ye get to the churchyard," said old Martin, as his son came up. "It 'ud ha' been better luck if they'd ha' buried him i' the forenoon when the rain was fallin', there's no likelihood of a drop now, an' the moon lies like a boat there, dost see? That's a sure sign o' fair weather, there's a

many as is false, but that's sure." Old Martin's remark was probably referred to the well-known maxim—

"Happy is the corpse that the rain rains on."

The country people of Scotland foretell the changes in the weather from the changes in the appearance of the new moon. If she "lies sair on her back" it is a sure sign of bad weather, or when her horns are pointed toward the south. It is the same sign when the new moon appears "up" the said moon in her arm, a superstition referred to in the famous ballad of Sir Patrick Spens:

O ever alike! my maister dear, I fear a deadly storm; I saw the new moon late yestern, Wi' the seal o' death on her arm; And if ye gang to sea, maister, I fear we'll suffer harm.

At Whitby, when the moon is surrounded by a halo with watery clouds the seamen say that there will be a change in the weather, for the "moon dogs" are about. There is also a belief prevalent among sailors and seafaring men that when a large star or planet is seen near the moon, or as they express it, "a big star is dogging the moon," this is a certain sign of stormy weather.

On one occasion after a violent storm off the coast of Devonshire a fisherman remarked that he knew the storm was coming, as he had observed a star ahead of the moon moving her, and another storm chasing her. "I know'd 'twas coming safe enough," it happened on this occasion that the moon was apparently near two stars, and the old Devonian saw trouble ahead, and his prediction changed to be verified. It was merely a coincidence, yet from such frail evidence has been evolved the weather folklore of the moon—Mary Proctor, in Record Herald.

REFLECTIONS OF A BACHELOR.

Married men kiss from duty; married bachelors kiss from habit.

Whenever you can get three ministers together, you can get a new funny story.

The ancients probably invented a pretty wife for the devil, as to explain why he was so wicked.

A woman is never worried by her big troubles near as much as she is troubled by her little worries.

Probably in heaven the women will all talk as nice to the men as they do on earth to their husbands when they have company.

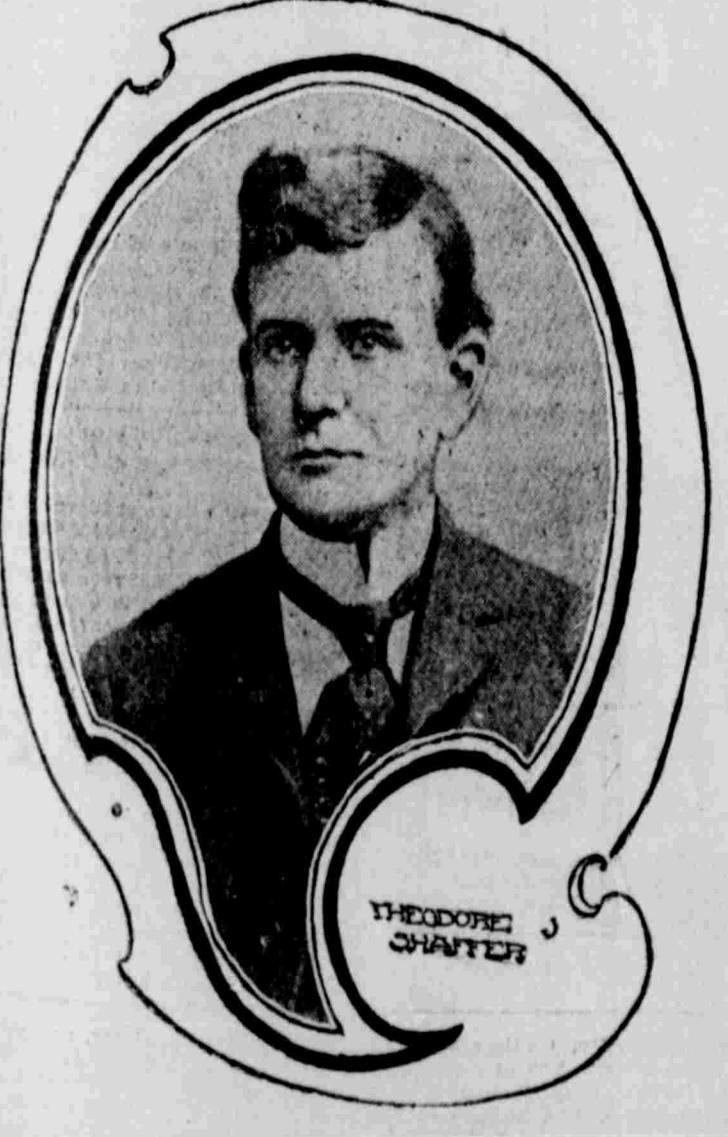
Every man who smokes at home, at some time has found rusty hair pins in his tobacco jar.—New York Press.

### PHILADELPHIA'S BIG BLACKMAIL MYSTERY.



The police of Philadelphia, Pa., claim to have a clue to the person who is terrorizing the millionaire colony of the Quaker town by threatening letters. Miss Laura Barney, a millionaire's daughter who was recently the recipient of an infernal machine sent through the mails, is here shown.

### STRIKERS WILL GAIN VICTORY.



The fight between the forty thousand striking steel workers of Pennsylvania and their employers, the American Sheet Steel company and the American Steel Hoop company is purely one of principle. Wages play no part in the trouble. President Shafter, of the Amalgamated Association, says his men simply had to strike to assert their manhood.