

SAM WARD'S RECIPE.

It Made Terrapin Stew Famous the World Over.

Epicures Pronounce It the Greatest of Culinary Triumphs—Taste for the Amphibian an Acquired One.

[Special Washington Letter.]

TERRAPIN time has come again. This delicacy of the rich and epicurean is becoming well-known in systematic cultivation alone has prevented the entire disappearance of the once numerous amphibians.

Terrapin farming—that is, the "planting" of terrapin as it would be known in oyster terminology—is not by any means new. About twenty-five years ago a man of the name of Dorlin established a terrapin pond just below Mobile where he kept young terrapin for growth, and where he claimed to be also raising terrapin from the egg. The report of the fish commission, however, denies that he did any breeding. The Dorlin terrapin farm was destroyed by one of the terrific Gulf storms, and was never reestablished.

Every year there is a scare throughout the eastern country, particularly in New York, Philadelphia, Baltimore, and Washington, over the likelihood of the disappearance of terrapin. Last year the report was spread at the beginning of the fall and winter season, and the wealthy were obliged to pay enormous prices. They were the more anxious to have terrapin at any price, because dealers said that another winter might come and no terrapin would be served. The report again went all over this section late the past summer when the farmers and fishermen of Maryland and Virginia were impounding terrapin for the coming winter trade. All along the shores of Chesapeake bay supplies of terrapin are being collected for the market of the immediate future. There are laws against impounding terrapin, but they are ignored.

Although there is no sale for terrapin until snow flies, which is about Christmas time, the farmers of the states contiguous to the bay are constantly on the lookout for stray terrapin, which they pick up and take home, where they hold them for the season. They do not fatten them. On the contrary they seldom feed them. Terrapin hibernate. When he has had his spring or summer feed he can be put in a pen or barn and left for two or three months. He will not die. A Baltimore dealer nailed one in a box and left him there for three months, at the end of which time he claimed that the captive weighed one ounce more than he did when he was imprisoned. This story is one which is well verified, and there are other tales of terrapin longevity, which are regarded by some as of less credulity. Scientists all admit, however, that the terrapin is a hibernating amphibian.

In the neighborhood of Chincoteague island, near the eastern shore of Maryland, in Chesapeake bay, there are several houses where from 200 to 1,000 terrapin are stored in straw in good seasons. They are very curious looking fellows of all sizes and are a sight to behold. Whenever the owner wants to display them he raps hard on the side



IN A TERRAPIN HOUSE.

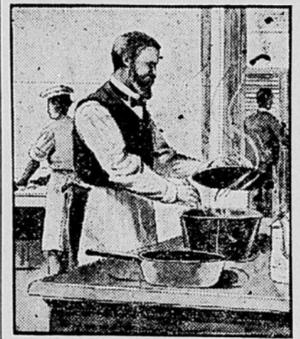
of the house before opening the door. Each terrapin sticks his head out of the straw to see what the noise is about. They have very acute hearing and manifest great curiosity whenever any unusual noises are heard. Down south they are lured to destruction by this trait. A fisherman rowing over the mud banks raps on the side of his boat. Water carries the sound, and the terrapin comes to the surface to see what made that noise, and the fisherman very promptly satisfies the curiosity of the inquirer.

The officials of the fish commission do not believe that the terrapin will become extinct so long as systematic farming is carried on, but they believe that this industry should be increased very largely.

Washington and Lafayette, Cornwallis and Tarleton knew the quality of terrapin stew, but they ate it sometimes for want of something better, and not as a luxury. Terrapin stew was one of the hardships of their military environments occasionally. There was at one time a law in Maryland providing that a man should feed only so much terrapin to his slaves, for even the slaves rebelled against such a diet. And, for that matter, no civilized white man really likes terrapin when he first eats it, but acquires the taste because it is fashionable and expensive, and because everybody

tells him what a grand luxury it will be when he becomes accustomed to it. All of which is true, for the taste once acquired is everlasting.

The farmers and fishermen along the bay shores ate terrapin because it was economical to do so. The crop was so valuable that they would not take the trouble to gather any more than was sufficient for the use of their own families during the season. Naturally they would expect their slaves to take to the same kind of food, but the slaves were right out in open rebellion against terrapin. They were docile enough and endured all sorts of hardships, and injustices, but when it came to terrapin for a steady diet they declared they could not stand it. Consequently the law was enacted limiting the amount of that sort of food for the slaves. But, beginning with



SAM WARD MAKING A STEW.

terrapin for the sake of economy, the white folks acquired the taste. Senator John M. Clayton, of Delaware, was very fond of terrapin. He usually bought an ox load of them for a dollar, and had them shoveled into his cellar like coals. His own people regarded his taste for terrapin as so peculiar that it became a tradition of his state until everybody began eating terrapin.

Although the negroes do not care for terrapin they are great hunters and cooks of the toothsome amphibian. They liked nothing better than to get away from plantation work and go hunting terrapin, and they are still so inclined. There was no commercial demand for terrapin previous to 1850. The waters of Delaware, Maryland, Virginia, North Carolina, and South Carolina fairly swarmed with them. They were unmolested except for home tables. But when the people of northern states began to acquire the taste the fishermen began bringing them to market. Then there was a system of southern hospitality, which was exceedingly shrewd. Relatives and other visitors from northern states were entertained lavishly, and they were given terrapin everywhere. They are regaled with stories of how to make the stew, and had it dined into their ears until they went back north talking terrapin and nothing else.

Sam Ward, once known as the king of the lobby, was successful in all his schemes before congress primarily because he was such an unusually extravagant entertainer. He studied all of the epicurean artifices and was himself one of the best of cooks. His terrapin stew was famous, and he always either made it himself or personally supervised its making. Here is his recipe: "Immerse live terrapin in boiling water. Let it boil half an hour. Then take out, remove lower shell, carefully cutting out the meat. Take out gill bag without cutting or breaking, and throw it away. Remove liver and cut it into cubes. Remove meat from upper shell, disjoint and place in iron pot with the cubed liver and a pint of the liquor in which terrapin was boiled. Watch carefully and cook until tender. Serve in a sauce made of two ounces best butter, a pinch of flour, half pint cream, cayenne pepper and salt. On the bottom of each plate place a piece of bacon cooked crisp, so that it will easily break all to pieces."

It was with that recipe that Sam Ward captured the prince of Wales, and until this day King Edward has his terrapin stews in season, made on Sam Ward's recipe. Until the day of his death John Chamberlin, the famous restaurateur, served terrapin in the same way. After his death the rich and extravagant guests of his house said that they could not get any terrapin fit to eat there, and so John Chamberlin's famous place in this city has long been closed. It was literally built on terrapin.

Terrapin are found only in America. From Long Island sound to Texas they are to be found, and a very few have been taken on the Pacific coast. The terrapin of the northern waters receive the preference of epicures, because their flesh is more delicate. That is because they develop more slowly than the terrapin of the southern waters. The most prolific waters are those along the Virginia shore just below the mouth of the Potomac river. The terrapin of Maryland waters bring better prices than the Virginian because they are finer, but Virginia produces fully two-thirds of all the terrapin in the market. The diamond-back terrapin of Chesapeake bay is the best of all, and therefore the most costly. And the most desirable diamond-back is the six-inch fellow. After them are the heifers and the bulls; the latter being cheapest and used in restaurants for terrapin soup, a very inferior imitation of the genuine stew of the tables of the rich.

Suppose you save up your extra pennies, and have a terrapin stew instead of turkey for your next Christmas dinner?

SMITH D. FRY.

CHEESE IS HEALTHY.

Contains Double the Nutriment of the Choicest Beef.

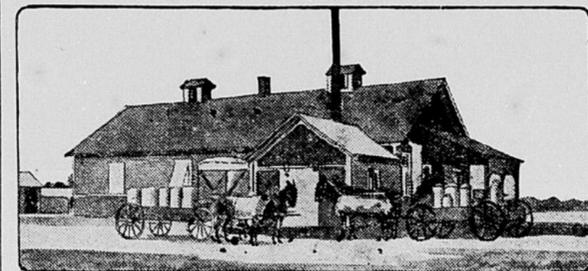
United States the Greatest Cheese-Making Country in the World—New York and Wisconsin at the Head.

[Special Milwaukee (Wis.) Letter.]

NOTWITHSTANDING the fact that cheese is much more nutritious than meat, and less expensive, much less of it, per capita, is used in this country than in England, where the latter is not so plentiful. America is the greatest cheese-making country in the world, yet the average consumption for each person is three pounds, while in England it is 18 pounds. Our great cheese-manufacturing centers are in Wisconsin and New York, each of which has about 1,000 dairies. There are about 1,000 others generally distributed over the country. Wisconsin only manufactures about one-half as much cheese as New York. The production increased from 100,000,000 pounds (all made by farmers) in 1850 to 1,492,699,143 in 1890, 97 per cent. of which came from dairies. Of this latter, 37,000,000 pounds was sent to Great Britain.

From one gallon of milk a pound of cheese may be made, containing as much fat as three pounds of beef and as much protein as two pounds. The casein and butter fat contained in this food are very nutritious. It not only furnishes needed fat for the system but also produces heat and energy. Casein is a valuable protein composed of hydrogen, nitrogen, carbon and sulphur. If sugar and bread be eaten with cheese, the combination furnishes a most valuable meal, but the food will be found hard to digest unless one exercises vigorously. It is by some considered advisable to mix a very small quantity of bicarbonate of potash with cheese when it is eaten, as an alkali assists in rendering casein soluble.

In manufacturing cheese, fresh milk is first poured into a vat and left until the cream rises to the top. If "skim milk" cheese is to be made,



A TYPICAL WISCONSIN CHEESE FACTORY.

the cream is removed. If whole milk cheese, it is left, and if cream cheese, more cream is added. The milk is now heated to a temperature of 90 degrees and left in the vat until it is sour enough to add rennet (an extract made from the fourth stomach of a sucking calf, an enzyme or bacterial product. As chynrosin and paxine, it is found in nature among both animals and plants). This causes the milk to coagulate in about 20 minutes, a quantity of green whey containing a slimy white mass of curds. No scientist has yet been able to discover how the rennet produces this result. The rennet only affects the casein, while acids added change the milk-sugar. After drawing off the whey in order to dry the curds still more, they are cut by a wire framework into half-inch cubes, which begin to shrink immediately. They are now raised to a temperature of 100 degrees and raked around until about one-sixth their original size,



PROF. H. W. CONN. (Discoverer of Bacillus 41, Which Has Revolutionized Cheese Making)

when they gradually form themselves into a compact mass, which is now cut up into pieces several inches square. When these become fibrous and oily, they are placed in a mill and ground, then into cylinders lined with cheesecloth and pressed for about 20 hours until solid. The cheeses are then placed in a curing-house where they acquire the desired ripeness and flavor. This process as described may seem very simple, but the dairymen do not find it so, for they have constantly to guard against hostile bacteria which may assail the material from the time it is poured into the vat as milk until it is a matured cheese. While trying to cope with these, he must exercise great care in order that friendly germs (without whose services he could have no good cheese) may remain uninjured.

In 1893, Prof. H. W. Conn secured a can of milk from Uruguay which contained a bacterium previously un-

known to science, and which has proved to be of incalculable value to cheese manufacturers. This is a fighter, killing harmful bacteria while ripening butter, cheese and cream. It is the famous bacterium "B 41," of which pure cultures are now constantly being made and used all over the country. It is hard to imagine the advantage this discovery has proved to the cheese manufacturer. All sorts of experiments had been made to get rid of dangerous germs. Heating the milk was found unsatisfactory, as it was hard to raise the temperature of a large tankful evenly. Prof. Conn demonstrated that one cubic inch of milk may contain 500,000,000 bacteria. They are in the milk when it comes from the cow, they come from the atmosphere, the hands and clothing of the milkmen, the hay, the pans and buckets, everywhere. They multiply with great rapidity in the warm milk. Various species may change the milk to a variety of different colors; some render it bitter, some strong. They sometimes cause a cheese to swell, and when cut it is seen to be full of bubbles. Sometimes red or blue mold is found in great patches, rendering it unfit for food, occasioning a dead loss. If salicylic acid be added to kill these small enemies, the germs that are necessary to proper cheesemaking are destroyed also. Hence the value of the discovery of "B. 41."

Wisconsin supplies nearly all our southern trade because, being fine in texture, its cheese stands the heat better than that made in New York, which supplies the export trade. A few years ago there was a large business done in "filled cheese," which is an adulteration, harmless and profitable had it not been represented as the genuine article, causing the government to legislate against it. The process of its manufacture consisted in using a "skim milk" cheese as a base and injecting into it with a steam jet some fat to take the place of butter. Oleomargarine was first used, then lard was found satisfactory.

The village of Cheddar, Somersetshire, England, gives its name to a cheese that has been noted for over 200 years. This is imitated all over the world, a very fine quality being made in Wisconsin. The English cheese of highest price and most imitated is the

THE FUEL PROBLEM.

Science Will Have to Solve It Before Very Long.

World's Coal Supply Nearing Exhaustion—What Has Been Done Toward Discovering Effective Substitutes.

[Special Chicago Letter.]

FIVE hundred thousand tons of coal per day—that is the estimated output of the United States since the settlement of the coal strike. A chunk of the black treasure as large as the Masonic Temple and the Chicago Auditorium combined dug out of the bowels of the earth to-day with only a big hole left—and another chunk as large or



IN AN EASTERN COAL MINE.

larger to-morrow—and so on day in and day out in ever increasing quantities!

This raises the old scare—"How long can it last? When will the coalless age be upon us?"

Back in the 60's the wise men of Great Britain broached the question. Parliament appointed a special commission which reported that at the then existing rate of increase in coal consumption the world's stock of black diamond would be exhausted in 212 years.

Scientists set about scheming substitutes for fuel. Many of our readers will remember the various machines for storing the rays of the sun; the windmill devices for saving heat. Then came the discovery of enormous coal fields in the United States, Siberia and China. Besides electricity for motor power was developed and largely allayed the fears of an early coal famine.

In the last few months the great coal strikes in the United States and France, backed up by similar troubles in England, Belgium, and Germany, have again brought forward the seriousness of the coal problem. People began to realize what it would mean to live, or try to live, without coal.

The worst scared people of the east are the English. Great Britain, until very recently, was the world's coal producing country. This estimate is put upon the coal in the different European countries:

	Tons.
United Kingdom	138,000,000,000
Germany	112,000,000,000
France	38,000,000,000
Austria-Hungary	17,000,000,000
Belgium	16,000,000,000

To this Asiatic Russia adds a wealth of 300 billion tons of coal. The Spanish-American war first called attention to the United States. Coal stations and coal supplies were more important to the victors, it is said, even than their better ships. Estimates show that the United States at present has between 1,000



HAULING OUT THE COAL.

and 1,500 billion tons of unmined black diamond with which to fight the world in war and in commerce. China has almost as large a supply and British journals of the last few months are teeming with these figures to arouse the people to their "rights" in the orient.

The enormous statistics of supply lose their rosy color when the figures showing the annual coal consumption are considered. Last year America used up about 190 million tons of coal. The year before it was only 182 million. This year it will fall short, but in the next twelve months it is expected that 225 million tons will be chopped out of our mines. All over the world there has been an ever increasing increase of coal consumption, so that now about three times as much coal is being used up as 20 years ago. If the increase continues at this rate, scientific journals say, the coal will all be gone before the 212 years named by the British commission.

"Something will have to be done," said the traffic manager of one of the largest railroads of the country.

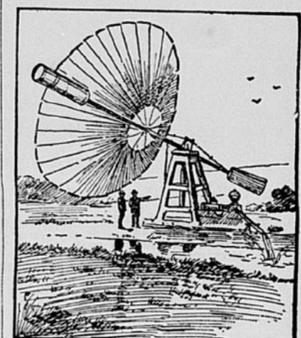
"This strike is settled, but I think coal will become more and more costly. Substitute fuel will have to be found."

During the strike in the anthracite regions many timely devices were tried. For one, porous brick saturated with petroleum was successfully used in many ovens—a new fuel which promised to find permanent friends in many households. Another unique substitute for coal is proposed by a German chemist and can be tried by any housewife. It is really nothing else than soap. Take petroleum refuse, waste lard and fat, mix it with 10 per cent. of soda lye and steam it gently, adding some water. Incipient saponification takes place. Add saw dust, coal dust and resin, as much as you have on hand, and when a pasty mass has formed you have fuel—the world's cheapest fuel, the chemist says.

Air is also described as a substitute for fuel. In reality air or the oxygen in the air is the element that combines with the fuel to make fire, and various devices are now being tried to mix air with petroleum vapors, and with oil so as to extract the greatest possible amount of heat from every unit of fuel. The well known Bunsen burner and the Welsbach light are illustrations of this principle, which will probably be applied on a much larger scale in furnaces as well as kitchen stoves.

There are two other familiar substitutes for coal, which will be utilized extensively before many years. Both of these are earth—the so-called oily shale and peat. The latter is really nothing but half-formed coal. Many hundreds of centuries ago, the decaying vegetable growth just like peat bogs were pressed down by enormous layers of earth forming above them and turned into coal. Now the formation of new layers of earth has ceased and the peat has remained peat.

In Germany there are many factories in which the water is pressed out by heat, the remainder is condensed, heated and pressed until now the product is greatly like anthracite and is said to be better than any wood for fuel. The amount of unused despoiled peat left to moulder is prodigious. All the way from the Atlantic ocean to the Missouri river and as far south as North Carolina are peat bogs hundreds of feet thick. Holland, parts of Ger-



MODERN SUN REFLECTOR. (Used in California for Heating Water in Boilers and Tanks.)

many and Denmark are full of them, and in the Indian ocean there are scores of islands of peat.

Yet, the fact remains that these riches also are limited. Sooner or later some method of getting along without fuel must be found by utilization of the inexhaustible forces of nature. Thanks to electricity these forces can now be stored away and set free at the dictate of man.

Something has been done toward utilizing the energy of water and air in the water mills and windmills, but this is not one per cent. of what can be done. At Schaffhausen, Switzerland, huge mills convert the power of the falls of the Rhine into electricity, and conduct it by cable to the city, where it runs the street cars, pumps the water and lights the houses. Windmills which lift water to a higher level from which it gains power by its own fall are used without electricity in the Netherlands.

But the greatest machine of all—the one that will put an end to all coal trusts—is yet to be invented. It is a machine that will catch the rays of the sun. Mouchot's recepteur solaire was shown at the Paris exposition in 1878, and since then some progress has been made, notably by Louis Gathmann, inventor of the Gathmann gun, who believes that he will yet muzzle old Sol's power in a sun motor and give it to the world in spite of President Baer and J. Pierpont Morgan.

E. T. GUNDLACH.

The Color of Clouds. A cloud is white because its corpuscles of vapor are large enough to reflect all rays, large and small. But the upper air has infinite numbers of particles so minute that they throw back only the smaller—or blue—waves of light, and not the larger red, yellow and green waves, and thus blue is the predominant, but not exclusive, color of the sky. This long-accepted theory of Tyndall's is now questioned by M. Spring, the Swiss physicist. He has experimented with luminous rays under many conditions, getting all colors except blue, which failed to appear until, by the aid of electricity, he secured a pure atmosphere. This was clearly tinged with blue, leading to the conclusion that the blue of the sky is an essential quality of the air, of chemical origin.

Proved an Alibi.

"Is this the cracked wheat, Jane?" "I dun know, mum. I ain't looked at it or teched it; an' if it's cracked it wuz cracked afore I come here."—N. Y. Observer.