Farm, Garden and Household.

TO DESTROY RATS.—These pests can be got rid of by mixing live plaster of Paris with flour, dry, in equal parts. Sprinkle a little sugar on it to make it more sought after. Lay in dry places and about their haunts. They eat ravenously, drink, and die sure.—*Cor. Western Rural.*

SAUSAGE MEAT.—If you want it extra nice, take two nice fresh hams and one shoulder; take off the skin and have it chopped nicely; season it with salt, pepper, sage, and a very little sugar. If you like spiced meats, use with that a few cloves, some mace, and nutmeg. Keep it in a dry, cool place, and fry it in balls, or stuff the skins when you first make it for dried sausages.

FOR DRIVING STEERS.—A subscriber asks: "Which is the best a whip or a goad for driving steers or oxen; also, will some one give directions for making or fitting a yoke?" We would prefer a whip, says *Rural New Yorker*, a goad is simply a brutal instrument of torture and, it cannot be used without inflicting torture. A whip may, if the driver is fit to drive steers or oxen, be used without inflicting pain; but both the driver and oxen need to be well trained in such cases.

MILK.—Milk of average quality has in every 100 parts about the following composition: Water, 87.40; butter, 3.43; casein, 3.12; milk sugar, 5.12; mineral matter (ash), .93. Milk varies in composition from a variety of causes, sometimes having less water and more butter. Very rich milk contains from 7 to 8 per cent of butter, and will not unfrequently show a percentage of more than 16 parts of dry matter, while that which may be called of a fair average quality will yield no more than 12 to 13 per cent of such matters

STEAMING FOOD FOR MILCH COWS.—Leo writes to the *Tribune* that he feeds all cooked food to fifty cows, sells his milk at twenty-five cents a gallon, and that steamed fodder will produce as much milk as the best clover hay. He soils his cows in summer, beginning the season with winter rye, then oats, clover, lucern, millet, Indian corn sown in drills, turnip tops. He says he has got some millet that will grow fourteen feet high, with a head nearly eighteen inches long, which on highly manured soil he expects to cut three times. He has a specimen of the long heads to prove his veracity.

NEW METHOD OF STORING GRAIN.—A plan has been submitted to the French Academy for storing wheat in portable sheet-iron granaries, in which a vacuum is maintained equal to at least three or four inches of mercury, this being sufficient to destroy all insect life, (although more vacuum is preferred), and to insure the evaporation of any moisture in the grain. The apparatus is of cylindrical form, placed vertically, and with convex top and bottom, the top provided with an opening through which the inlet of grain is led, with a waive pipe through which the air is exhausted, and with a gauge by which the degree of exhaustion is indicated. The grain is removed through an opening in the bottom. In an experiment where living insects where introduced in large quantities with the grain, it was found that they were all killed without doing any mischief, and at the end of six months the wheat was found to be in as good condition as at the outset.—*New York Daily Bulletin.*

SHEEP.—A farmer put into his yard 300 sheep that weighed an average of 99 pounds each; he fed them 120 days, and they gained in that time 120 pounds each—in all 8,700 pounds for the flock. He fed them for sixty days all the straw they would eat, and one pound of corn each per day; for the next sixty days he fed them all the hay they would eat and the pound of corn each. This gives, in all, two bushels of corn (120 pounds) for each sheep, and probably two pounds, or 2 1-2 lbs. of hay for each sheep for 60 days—say 2 1-2 lbs. of hay each—in all 250 pounds per day—or 150 pounds for each sheep. Then we have, corn at one cent per pound and hay at $15 per ton, just eight cents per pound for the 29 pounds of mutton and wool produced. If the manure made, paid for the trouble and straw consumed. Then he had, in addition to his gain of twenty-nine pounds, each sheep (which, as has been stated, was paid for in hay and corn at eight cents per pound), the increased price per pound that the sheep would bring on the first day of February, when fat, over their price on the first day of December, when they went into the yards—and generally this would be from 50 to 100 per cent advance.

STICK TO THE FARM.—Miss Mary A. E. Wager of *Moore's Rural* says she is quite sure that the more a person knows of life in great cities the greater emphasis will he or she give to the advice contained in the head line, and for these reasons: The majority of country boys are in no sense of the word fitted or prepared for participations in the rivalry and competition of business in the city. They would find themselves as much out of their sphere or groove for usefulness as a statesman would to be placed in command of a ship. Or to make the illustration more pertinent, they would succeed in the city in about equal measure with the city men who go to the country to get rich farming, and you know how that is. Hundreds of young men come from the country to the city weekly in search of work. I see them anxiously walking the streets, or standing at the street corners in a brown study. Often times they are robbed of their little store of money; decoyed into hells where in a single hour they learn more of the ways of death than would have come to them in an entire life time elsewhere. Ah! but you wouldn't be seduced from truth and virtue! Perhaps not; but granting you to be firm as the everlasting hills in righteousness, what could you do to insure success? Can you set type? Can you keep books? Do you understand commercial business? Can you write a book review worthy of the book? What do you know of art, or science, or of any one branch of either? Have you a well defined idea, or a half defined idea of just what you wish to do? If so, what qualification do you carry with it? To leave the farm for the city is as foolish and dangerous, in most cases, as to jump overboard far from shore, when you are morally certain you do not know how to swim.

Shakespere's Handwriting.

It is nothing less than marvelous that a man who wrote as he wrote—and altogether, no man ever wrote like him—that a poet, the author of such plays and such poems; that a man possessing so many friends and admirers, with whom his correspondence must have been extensive, should not have left a single line behind him traced by his own hand. Of all his poems and plays here does not exist a page, a line a single word, in manuscript. All Shakespeare's manuscript plays could not have perished in the fire that destroyed the Globe Theatre. The author must have made little account of them himself; but how great would our estimation be of a single act of any one of Shakespeare's plays, in his own handwriting! We have just now among us a parallel to the tulip mania. Thousands of dollars are willingly paid for a picture which the same number of dimes would once have purchased. Rather, let us say that the dimes were given for the picture, and that the dollars by thousands are given for the painter's name. Well, what would not be willingly paid (for the sake of Shakespeare's name) for the original manuscript say of "Hamlet"? There would be a fierce fight among competitors for even a single passage. We fancy the lines beginning with "The quality of mercy is not stained," or those that open with "She never told her love," and hundreds of others, could not be had for dollars covering each letter. What a contention there would be for the first love letter, addressed to any one. A costly holograph! Alas! there are neither lines nor letters. All that has been saved of Shakespeare's handwriting is confined to a couple of signatures of his name to certain deeds, and in those superscriptions the name is spelled differently. Even the forgers have not dared to produce a letter by Shakespeare.

Breaking up a Waterspout.

The ship Rhine, a sailing vessel from London, encountered an immense waterspout about 1,200 miles out. One of the seamen, describing the phenomenon says the weather had been squally but the wind had calmed, and the sea was going down. The watch below, tired out had just turned in when the officer of the deck yelled, "all hands on deck—turn out quickly." The sailor who tells the story continues:

I jumped up as quickly as I could, hastened aft to the mainmast. The crew turned off in different directions like madmen. I noticed that the faces of most of them were white as chalk, and that the captain's was as red as blood. His face always got that way when he was excited in a gale. I didn't know what was the matter, and as I looked around me at the confusion, the cause for which I couldn't see, I felt my heart do what it hadn't done for seventy years—beat against my ribs. I saw the second mate and asked him what was the matter. He answered me by telling me to go to the main brace, or he would pitch me overboard. I went there pretty quick; *not* because I was afraid of going overboard, but because I felt that something terrible was going to happen, and that even my weight might save the ship. When I got to the rope a fellow standing near me said, "*Pull* old man; don't you see the waterspout?" I followed the direction of his eyes, and there, sure enough, not more than half a mile from us, was the biggest waterspout that I had ever seen in all my life. It towered above the ship at least two hundred feet, and seemed to be the breadth of half the ocean. It was coming toward us like a steam engine, and the water for hundreds of yards ahead of it was boiling like water in a kettle. We braced the yards around, put the wheel hard-a-port, and did everything that lay in our power to get out of the way of the terrible destruction that was rushing upon us. There wasn't a breath of wind stirring, and there we lay right in the path of the waterspout, unable to do the least thing to save ourselves from the death that we felt sure must come in a few moments.

There were about seventy steerage passengers with us the most of whom were women and children, and the way they screamed and went on was enough to take the heart out of any man. One old woman caught me 'round the legs and begged of me for God's sake to save her, while everyone was rushing around trying to find some shield from the approaching crash. The captain swore and went on terribly because we couldn't move an inch, and seemed to be going out of his mind, for I saw him deliberately knock a man down who was standing near him. Some of the men ran down the forecastle ladder that they might not see themselves die.

What I have been telling you now all occurred in a moment, but the waterspout had come much nearer to us, and we could hear the fearful hiss and splash of the water as it came whirling on. Just then I heard a young gentleman in the cabin ask the captain whether he had a gun on board. The captain said "No," and the young man's face turned as white as snow, and I saw him shake all over. He put his hand to his head and staggered toward the main hatch, and in another moment he would have fallen down "twenty decks," when suddenly there was a cry from above that sounded like the roar of a madman. It was heard above the loud roar of the surging water, and every eye was turned in the direction that it came from. It came from a "shipmate" that we called "Jack." He was a smart fellow on his feet, and was a regular monkey among the rope when he got aloft in a storm. There he was with a heavy block of wood in his hands that he held above his head, and was shouting for us to "stand from under!" He was on the main-yard-arm, the yard that "carries the "storm sail," you know. We all ran forward, and then the coast was clear, "Jack" gave the block a swing and sent it down on deck as quick as a flash. It struck a piece of sheet-iron that lay near the main hatch, and made a terrific report that sounded like a cannon. We kept our eyes on him, for he seemed about to fall, but he caught hold of the "port bowlines" and regained his balance. Just then the ship careened over on her beam ends, lurched back again, and then stood steady as before. Nearly every one was thrown down, and some of the passengers were badly hurt. As soon as we got upon our feet we saw no more of the waterspout, but in its stead the whole sea was just as white as though it was composed of soad-suds.

We felt that it was over, and that the noble "Jack" had saved us by his cool-headedness, but it was some time before we could recover from the paralysis that seemed to have stricken us all.

When we did recover, we felt as only men can feel who have been snatched from the jaws of death. Work seemed a pleasure after that, for it reminded us that we had life in us.

There were on board, counting officers crew, and all, about 150 persons, and if that spout had struck us it would have sent us, ship and all, to the bottom of the sea, and no one would have known what sank us. Ever since that day I have been convinced that the City of Boston was lost in this manner.

I suppose the water that was in the air would have weighed 10,000 tons; it couldn't have been less; and as there was a brig sailing ten miles from us in the direction of the waterspout's course, and no one on board saw it, it must have formed between us, two, and reached its immense proportions in about half an hour.

What Tilton Says.

Theodore Tilton writes as follows to a friend relative to late scandals:

MY COMPLAINING FRIEND: Thanks for your good letter of bad advice. You say, how easy to give the lie to the wicked story, and thus end it forever.

But stop and consider. The story is a whole library of statements—a hundred or more—and it would be strange if some of them are not correct, though I doubt if any are. To give a general denial to such an encyclopedia of assertions would be as vague and irrelevant as to take up the *Police Gazette*, with its twenty-four pages of items, and say, "This is all a lie." So extensive a libel requires (if answered at all) a special denial of its several parts; and furthermore, it requires, in this particular case, not only a denial of things misstated, but a truthful explanation of other things that remain unstated and in mystery. In other words, the false story (if met at all) should be confronted and confounded by the true one.

Now, my friend, you urge me to speak, but when the truth is a sword, God's mercy sometimes commands it sheathed. If you think I do not burn to defend my wife and little ones, you know not the fiery spirit within me. But my wife's heart is more a fountain of charity, and quenches all resentments. She says: "Let there be no suffering, save to ourselves alone," and forbids a vindication to the injury of others. From the beginning she has stood with her hands on my lips, saying, "Hush." So when you prompt me to speak for her you counteract her more Christian mandate of silence.

Moreover, after all, the chief victim of the public displeasure is myself alone and so long as this is happily the case I shall try, with patience, to keep my answer within my own breast, lest it shoot forth like a thunderbolt through other hearts. Yours truly,

THEODORE TILTON.

HOW HE DIED.—The Emperor Napoleon died almost alone. His vital forces failed him at once, and there was no time to recall the friends who had but just left him. The Prince had gone back to Woolwich to school; Dr. Gull and Father Goddard were in London. The Prince saw his father no more alive, and the others reached the gates of Chiselhurst Park just as the Emperor breathed his last. The Empress was at the bedside, and so were four physicians. The medical men declare that the Emperor's death is due to other causes than the recent surgical operations.

It is a sign of a narrow mind to be always in a quiver.

A Terrible Story.

An old proverb hath it, that "murder will out." There are many curious things in this line wrapped up in a story published by the Sacramento *Union*—a story as full of horrors as any which even a Mrs. Wood could frame. The story is in the form of an affidavit made before a justice of the peace in Sacramento City. Annie Lohry testifies that on the 19th of February, 1869, she left home to gather some early spring flowers, and after a time found herself in the vicinity of what was known as the Corliss Ranch. Sitting down to rest, she was made the involuntary witness of a terrible struggle between two brothers, resulting seemingly from a quarrel over the distribution of several thousand dollars. She saw the death blow struck, and screamed, which attracted the murderer's attention. The latter, smitten with a terrible remorse, prayed by all things she loved on earth, to go to the aid of his brother. She was almost paralyzed with horror and fear, but managed to reach the side of the dying man. She held his head and tried to bind up the wound, but the man died in a few minutes. The murderer wept such tears as only a murderer, and a fratricide at that, can weep, and then the matter of his own safety came in. He urged the girl to take his brother's share of the money and keep silence, but she refused. He seemed half-minded to kill her, but finally, with revolver at her head, made her swear a dreadful oath that she would not reveal the secret of the murder for four years, that term being named because his mother could not leave the State until the end of such period. The murderer went to a place near by, where were two horses, and took a blanket from one of them and prepared to cover the body of his poor brother, but was too overcome to do it; so the girl covered up the body. Then they left the spot. Several times he put the revolver to her head on the fearful journey; but finally she saved her life.

The murderer had promised to release her from the keeping of the secret, if possible, in less than four years. So she met him several times in the Uniontown graveyard. Finally he released her from what she had considered binding, and so she just now makes this affidavit.

To think of that deed! To think of the scene at the brook, when the murderer made her wash her apron of the blood, while he washed his hands and was deathly sick! To think of that young girl carrying that terrible secret for four years, because she thought it binding!—no words can set it forth. We once heard Beecher say that he would like to know, for one half-minute, the feelings of a murderer. For one half-minute, and no more; that would be an age. But who could stand the ordeal of a half-minute of the life of the man of Corliss Ranch? Reason would totter.

A Man With a Mania.

Another curious man is backwards and forwards here—a Lord Vernon, who is well informed, a great Italian scholar deep in Dante, and a very good humored gentleman, but who has fallen into the strange infatuation of attending every rifle match that takes place in Switzerland, accompanied by two men who load rifles for him, one after another, which he has been frequently known to fire off, two a minute, for fourteen hours at a stretch, without once changing his position or leaving the ground. He wins all kinds of prizes; gold watches, flags, teapoons, teaboards etc., and is constantly travelling about with them, from place to place in an extraordinary carriage, where you touch a spring and a chair flies out, touch another spring and a bed appears touch another spring and a closet of pickles opens, touch another spring and disclose a pantry. While Lady Vernon—said to be handsome and accomplished—is continually cutting across this or that Alpine pass in the night, to meet him on the road, for a minute or two, on one of his excursions, these being the only times at which she can catch him. The last time he saw her was five or six months ago, when they met and supped together on the St. Gothard! It is a monomania with him, of course. He is a man of some note; seconded one Lord Melbourne's addresses, and had forty thousand a year, now reduced to ten, but nursing and improving every day. He was with us last Monday, and comes back from some out of the way place to join another pic-nic next Friday. As I have said, he is the very soul of good nature and cheerfulness, but one can't help being melancholy to see a man wasting his life in such a singular delusion. Isn't it odd? He knows my books very well, and seems interested in everything concerning them.—*The Life of Charles Dickens.*

A Shocking Tragedy.

Hugh Barr, occupying a basement at No. 48 Front street, Brooklyn, who had been in prison since 25th of November last, for an assault committed upon Margaret Bradley, was released a few days ago. He took home a half gallon of whisky, and his wife, acting under his instructions, invited several neighbors to partake of his hospitality. The party became quite drunk, and subsequently a general row ensued. Barr declared he would make the place too hot for his guests, and seizing a lamp full of kerosene oil, poured its contents over the red-hot stove. A portion of the fluid was dashed over Alice Barker, and the room was instantly filled with flames that communicated with the dress of the woman Barker. Barr had told them at first that they must get out as best they could, or take the consequences. Alice's screams brought assistance, but too late to save her from injuries of a most horrible character. Her clothing was burned from her body, which was blackened and blistered. Her hair was entirely burned off, her hands and legs were almost a crisp, and her face was unrecognizable. On the arrival of the police a shocking scene was presented. The oil had burned itself out without setting fire to the building, but the unfortunate woman was dying on the floor, having the appearance, at first sight, of a mere cinder. When it was found that she was still alive, she was wrapped in a blanket and taken to the City Hospital. The physicians there pronounced her injuries inevitably fatal. Barr was arrested and locked up to await the result.

Earthquake Fun.

The Oregon papers are making fun of the last earthquake in that region, for it affected persons in quite different ways. A young gentleman and lady were out walking at the time. About half an hour after, they returned from their promenade and then learned, for the first time, that anything unusual had occured. People rushed into the street scantly clad. One loving husband, who had "just stepped out to see a man on business," rushed home with a billiard cue that he had forgotten to replace, in his hand. His wife has vetoed all business engagements after 8 o'clock, P. M. The next little item we take as we find it. One irascible gentleman jumped from bed scantily attired, possessed himself of the cowhide, and made for the room of his boys up stairs, and rushed into it, exclaiming, "I'll show you how to be fighting at this time of night."

Newspaper Decisions.

1.—Any person who takes a paper regularly from the post-office—whether directed to his name or another, or whether he has subscribed or not—is responsible for the payment.

2.—If a person orders his paper discontinued, he must pay all arrearages, or the publisher may continue to send it until payment is made, and collect the whole amount, whether the paper is taken from the office or not.

3.—The courts have decided that refusing to take newspapers and periodicals from the post-office, or removing and leaving them uncalled for, is *prima acie* evidence of intentional fraud.

A Western paper affirms that among the unfortunate women lost by the Fifth Avenue Hotel fire was a near relative of ex-Collector Tom Murphy, who had voluntarily chosen to work in a menial capacity.

Cases of Spontaneous Combustion.

The first case of alleged spontaneous combustion which attracted general notice happened in 1725, and was put on record by the celebrated Le Cat. Le Cat, happening to be at Rheims in the above-mentioned year, lodged in the house of a man named Millet. One morning in February, the body of Madame Millet, a woman well along in years, and addicted to drink, was found lying almost entirely consumed upon the kitchen-floor, near the hearth. Only the head, part of the legs, and a few of the vertebre, had escaped combustion. The floor beneath the body was also slightly burnt. Millet himself was at once arrested on a charge of murder, a supposed intrigue with a servant-woman furnishing the motive for the crime. In defence, he stated that he and his wife had retired to rest as usual, when she, being unable to sleep, went out to the kitchen, as he thought, to warm herself. He was subsequently awakened by a smell of burning, and, going to investigate, found the body of his wife lying in the manner described. In spite of this story, Millet was convicted of murder; but, appealing to a higher court, was saved by the plea of spontaneous combustion. And, certainly, whatever may have caused the death of the deceased, there was no evidence of crime on the part of the husband.

The case of Grace Pitt, in England, in 1744, was, in some respects, like that of Madame Millet, except that there was no suspicion of murder. Three separate accounts of this case nearly coincide. The victim was about sixty years of age; and, it is said, had recently drunk large quantities of spirits. It was her custom to descend every night, half dressed, to the kitchen, to smoke her pipe before the kitchen-fire. The night of her death she arose as usual, and was missed by her daughter in the morning. The latter, going in search of her mother, found her stretched out upon the right side, the head near the grate, the body extended on the hearth, and the legs on the floor, resembling a log of wood consumed without flame. The fire being quenched by pouring on water, the remains were found to resemble a heap of coals covered with white ashes. And, near the body, were found a child's clothes and a paper screen, both quite uninjured, showing that the combustion could not have been particularly violent.

A Valley of Mastodons.

If M. Octave Pavy does not succeed in finding the North Pole, or even the Polar Sea, we can still have the consolation that he has, in a very early stage of the voyage, made a most interesting discovery. The expedition left San Francisco in June, and late advices state that in the latter part of July the explorers reached the shores of Wrangel Land, near the mouth of a great river, running from the northeast, and which is not set down on any chart. This M. Pavy considered as confirming another of his theories that there exists a great Polar continent, and of which the temperature is sufficiently warm to melt the snow. The current of this hitherto unknown stream flows in an easterly direction along the coast, with a rapidity of six knots an hour. M. Pavy and party followed the plain of this river towards the north for about 250 miles. The plain is uniformly level, its width varies from fifty to sixty miles, and it is bordered by mountains of great height, with inany perpendicular peaks. About eighty miles from the mouth of the river the travellers found upon the plain the remains of mastodons, and on clearing away the snow in a place where tusks were visible, they brought to light the enormous body of one of the animals of an extinct race, in a perfect state of preservation. The skin was covered with black and streaked hair, very long and thick on the back. The tusks measured eleven feet eight inches in length, and were curved up to a level with the monster's eyes. The animal was in a kneeling posture, the front legs being bent, while the hind parts were deeply imbedded in the snow, indicating that the mastodon had perished in struggling to get out of a mire hole or snow drift. Professor Newcomb could not find any special characteristics distinguishing the extinct mastodon from the elephant of to-day. He took from the stomach some specimens of bark and herbs, the nature of which he could not analyze on the spot. For the space of many miles the plain was covered with the remains of mastodons, indicating that a numerous drove of these gigantic animals had there perished, owing to some sudden change or convulsion of nature. The region abounds in Polar bears, which devour the remains of the mastodons.

A Horrible Outrage in Russia.

News has reached the Jewish Chronicle of the commission of a fearful outrage upon a Jewish family, in the District of Michaelow. A Jew was landlord of an inn, which was solitarily situated on the border of a wood. The family consisted of husband, wife, brother and four children. On the 15th instant, at about six in the evening, two laborers came into the inn and called for some brandy, for which they refused to pay, and jeeringly asked, in addition, for the loan of five roubles. As the landlord refused to lend them any money and demanded payment for the brandy, the laborers became abusive, and ultimately were turned out the house, the landlord detaining the caps of the men, so that they might be afterwards identified when he complained of their conduct. The laborers went away, muttering ominous threats. When the innkeeper and his family had been asleep but a short time, they were awoke by loud cries of "Fire," and on rushing out of the house they were attacked by eight men, among whom were the two laborers who had come to the inn in the early part of the evening. The landlord and his family were thrown to the ground and bound. The men then set to plundering the house. When they had ransacked the place, they caught hold of the poor landlord, his wife, brother and their younger children and threw them into the midst of the burning building. One, the eldest son of the landlord, about twelve years of age, managed to escape into the neighboring wood. The others perished in the flames. One of the laborers has been arrested, and the police are in active pursuit of the other murderers.

Where They Got Their Shells.

There is not much lime in the sea—probably not more than there was in Falstaff's "sack"—but there is enough. And the use it is put to is one of the curiosities of natural history.

Every inhabitant of the ocean which has a shell derives the materials of which that hard covering is composed from the water. Besides, the lime is secreted or rather separated from its food, as birds do it for making a covering for their eggs, mollusks take up the largest amount directly out of the water they breathe. Every time an oyster draws water through its gills, some of its lime, which is held in solution, is taken possession of by appropriate vessels and goes directly to the living membrane which deposits it, and thus the shell grows. It is assured that a single drop of sea water contains only about the ten thousand six hundredth part of a grain of lime. But the incessant respiration of the dweller in one or two years makes a house weighing in some cases many pounds. When the animal dies most of the shells gravitate and aggregate to the bottom, where, becoming broken and impacted into solid masses, mixed in fine earthy deposits under immense hydrostatic pressure and chemical forces, they become marble. All marble quarries are supposed to have thus originated in the abysses of primitive seas, and were afterwards elevated to where they are found by upheaval.

The women of the Attakapas parished and St. Landry, Louisiana, have sent to market yearly since the war not less than $1,000,000 worth of chickens and eggs, besides supplying home demands and the villagers and those who do not raise chickens in those parishes.

A French physician has published a pamphlet proving that cigarette consumers invariably die of consumption before they are fifty years old.

Every Boy His Own Gas-Maker.

Gas, which supplies the artificial illuminating power, which has almost wholly superseded that obtained from the animal and vegetable fat and oil, resin, wax, paraffine, and sundry other materials, was not introduced into London until the summer of 1805, and did not come into general use there until 1814.

As far back as the year 1739, Doctor Clayton, an English chemist, reported that from the combustion of bituminous coal (which abounds in England, and is to be found in great quantities in the neighborhood of Pittsburgh and other parts of Western Pennsylvania) could be obtained the inflammable aeriform fluid, now called carbureted hydrogen—which is the ordinary gas now almost universally in use.

Clayton had not *discovered* gas. It was known, centuries ago, that fossil coals yielded a combustible vapor, and that large quantities of combustible gases were often evolved from coal and other mineral seams, and also from salt mines. In some places this gas is so abundant that, simply by boring a hole in the ground, sufficient gas flows out capable of being utilized for the purposes of illumination.

At Fredonia, New York, a mill had to be pulled down, and a large quantity of gas evaporated from the broken soil, on the banks of the river Canadaway. A digging was made into the bituminous limestone, and a gasometer was erected to receive this gas, which now serves for the purpose of illuminating the locality.

As early as the year 1770 gas was observed to issue from a salt mine in Hungary, and this gas is now collected and used to light up the mine. So in China and other places. In Central Asia and near the Caspian Sea there are fires continually burning at a great depth in the earth—the result of gas issuing from the soil and accidentally set on fire.

Mr. Murdoch, a Scotchman, after having lighted his work-shop, in Cornwall, with gas, in 1792, partially introduced it into the steam-engine factory of Boulton & Watt, at Soho, near Birmingham, in 1718. Still it was not generally known, and indeed was looked upon as only an experiment. But in 1802, on the occasion of the Peace of Amiens, which put an end to the ten-years' war of Europe against France, the general joy of the British people was expressed in a variety of ways. Mr. Murdoch covered the entire front of the Soho works with little burners, attached to small metallic tubes or pipes, and almost in one moment, as if by magic, the flame rapidly ran, in jets, all along the tubing, making an illumination at once the most novel and brilliant imaginable. The fact was ascertained, but, as usual, people were slow to act upon it. Moreover, people were alarmed at the idea of explosions, and feared that the new process, however brilliant, might be unmanageable, if not dangerous.

In 1803 one of the London theatres was gas-lighted, for a few nights, as an experiment; and in 1812 the first gas-light company in London was duly chartered.

Gas was introduced into New York city in 1823. It had been partially used in Dublin five years earlier, but was not used in the street lamps until 1825.

The first gas-meter was made in London in 1820. Before it came into use gas was paid for, not by the quantity consumed, which it was then impossible to ascertain accurately, but at so much per hour for each burner.

It was ascertained that, in 1869, the gas-pipes in and around London extended upward of two thousand miles, and are daily increasing. It was stated, at the same time, that there is a leakage of nine per cent., through the faulty joints of the pipes, in the gas supply of London.

To make coal-gas is very easy. Most school-boys, I suppose, know how to do it, at a few minutes' notice. Here is the process, which I tried a hundred times or more before I was ten years old:

Get a little bit of bituminous coal—as much as the size of a walnut will answer. Pound it small, almost into dust, with a hammer or a cobble-stone. Take an ordinary tobacco-pipe (one with a long stem is preferable), and fill it with the pounded coal, pressing it in pretty closely with your thumb—I should have said, nearly fill it. On the top press down some tough clay, reduced to the consistency of putty by being tempered with a little water. Then put the pipe, filled with coal, and closely covered with the tenacious clay, and insert it carefully between the bars of the grate, so that the clay on the top of the bowl may not be disturbed. In a minute or two, the heat of the fire evolves carbureted hydrogen gas from the coal in the pipe.

If the top-covering of clay is imperfect, this volatile gas will find its way through the clay, and burn very brightly for a few minutes; but if the covering be compact and complete, the gas flows out of the long stem of the pipe, which projects out of the fire, and you can immediately see and smell it. The smell is that of escaped gas—which is so unpleasant and unwholesome when perceived and swallowed in a room—and the appearance is that of a thick smoke. Then apply a lighted match to this vapor, which, being inflammable, instantly is all aflame—burning brightly until all the coal in the bowl of the pipe has parted with its gas. When this is done, there is an end of the flame.

Take the pipe out of the fire, remove the clay cover of the bowl, and the residuum remaining there is coke!

Now, this is the distillation of gas from coal, which lights our houses and streets—only at the gas-works the vapor is submitted to processes which purify it, thereby producing a clearer and brighter light when burning.

What is left after making the gas has a commercial value. Of these products, however, there is not space to say anything now and here.

Brewers in England.

A London correspondent of the St. Louis *Republican* says it is surprising how many brewers there are in Parliament, and what a degree of respectability attaches to their calling.

The wine trade and brewing stand at the very head of reputable money making callings in this country. The wine merchant gets access to society where the dry goods man would not be admitted, where even the exclusive silk dealer could not enter. A lower class of people wears silk than drinks wine. Brewing is as much a staple product here as wheat growing with us, and the brewer is above the wine merchant. He may not at present serve stately boards, but he got his position in a time when he filled a jovial bowl for the nobles; and a position once gained is never lost in this land of precedent. Besides, he is a man of wealth, his product is always in demand. The brewer that represents Great Marlow has inherited his business from several generations. All the wealthy families of the place are his kinsmen, and they come up in a right royal way to put him into Parliament. They all go and come at "the member's" beck, for on him rests the honorable fame of the house. The tradesmen follow suit from other motives. When one comes to know the servility and venality of English shopkeepers, he is not surprised at the contempt that attaches to them in the general estimation. They are the most dishonest and servile class in the country, and notoriously open to political bribery.

CLEANSING FEATHER-BEDS.—When featherbeds become soiled and heavy, they may be made clean and light as follows: Rub them over with a stiff brush or broom, dipped in hot soapsuds. When clean, lay them on some clean boards where the rain will fall on them. When thoroughly soaked, let them dry in a hot sun for six or seven successive days, shaking them each day. They should should be covered with a thick cloth during the night. If exposed to the night-air, they will become damp and mildew. This way of washing the bed-ticking and feathers makes them very fresh and light, and is much easier than the old-fashioned method of emptying the beds, while it answers quite as well.

An Arab Wedding Ball.

A curtain drawn across the door of the tent (writes a traveller in Algeria) concealed the bride, who, closely veiled, sat within, surrounded by women. On the outside between four and five hundred people were collected, and a clear space was kept in the middle for the dancers by two men with drawn swords, who vigorously applied, right and left, the flat of the blade to all who pressed too forward. On one side of the ring squatted the band, consisting of two men with instruments like flageolets and a drummer who occasionally accompanied the music with his voice

In the centre was a middle-aged woman, dressed in the usual dark blue cotton garments, but decked with all her ornaments—ear-rings, bracelets and a necklace—to which sundry charms and amulets, teeth of wild beasts, verses of the Koran sewn up in little bags, and various other odds and ends, considered as protections from the evil eye, were suspended; a large circular brooch of silver or white metal (the same in form as those used by the Scotch Highlanders) confined the loose folds across her bosom, and a small looking-glass set in metal dangled conveniently at the end of a string of sufficient length to allow of her admiring her charms in detail. Her face was uncovered, and her features were harsh and disagreeable, except the eyes, which were large and expressive, with that peculiar lustrous appearance given by the use of a mineral paint. Her feet were hardly visible from the length of her dress, and her finger-nails, together with the palms of her hands, were stained with henna. As soon as we had taken our stand in the front row, the music, which had ceased for a few minutes, struck up, and the lady in the midst commenced her performance.

Inclining her head languishingly from side to side, she bent time with her feet, raising each foot alternately from the ground with a jerking action, as if she had been standing on a hot floor, at the same time twisting about her body with a slow movement of the hands and arms. Several others succeeded her, and danced in the same style, with an equal want of grace. A powerful inducement to exert themselves was not wanting, for one of them more than once received some tolerably severe blows both from a stick and the flat of the sword; what the reason was I do not know, but suppose that either she was lazy or danced badly.

While the dancing was going on, the spectators were not idle; armed with guns, pistols, and blunderbusses with enormous bell mouths, an irregular fire was kept up. Advancing a step or two into the circle, so as to show off before the whole party, an Arab would present his weapon at a friend opposite, throwing himself into a graceful attitude; then suddenly dropping the muzzle at the instant of pulling the trigger, the charge struck the ground close to the feet of the person aimed at. After each report the women set up a long-continued shrill cry of "Ou-lu, lu-lu," and the musicians redoubled their efforts. The advance of one man is usually the signal for others to come forward at the same time, all anxious to surpass their friends and neighbors in dexterity and grace. Ten or a dozen men being crowded into a small space, sometimes not more than six feet wide, brandishing their arms and excited by the mimic combat, firing often at random, it is not to be wondered at if accidents happen occasionally to the actors or the bystanders.

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What the Season Suggests.

To assume warm clothing at the commencement of the cold season is only an act of common prudence. But something more than this is required to put the body in a state of defense against the searching atmosphere of winter. Damp has a depressing effect on the vital organs and the animal spirits. The amount of life power taken out of the strongest of us by the chilling vapors which frequently pervade our atmosphere at this period is very considerable, and to the weak and languid they are extremely deleterious. To protect the system against their effects, it must be inwardly toned regulated and reinforced, as well as shielded outwardly by appropriate garments. This essential service is more safely and satisfactorily accomplished by the daily use of Hostetter's Stomach Bitters than by any other means within the province of medical science. The fact here stated is as incontrovertible as a demonstration in mathematics. Nobody disputes it. It is a matter of common belief and of general record. Here the case might be rested; but the public, naturally enough, wants to know why this famous vegetable specific is so far ahead of all other medic