☞ All communications for this paper should be accompanied by the name of the author; not necessarily for publication, but as an evidence of good faith on the part of the writer. Write only on one side of the paper. Be particularly careful in giving names and dates to have the letters and figures plain and distinct.

## FANCY THAT.

The woods rang out a merry laugh,
As two went gaily by.
The taller head was its by half,
But hers the saucy eye.
Beneath her old brown summer hat
He stole a glance or two.
Then vowed he loved her—fancy that,
And ever would be true.

For her reply he stays and lingers,
And she to vex and tease.
Tells slowly on her dainty fingers
Sweethearts by twos and threes.
"The little finger's Tommy True,
The next is Georgie Pratt.
I think them all as nice as you,"
She said, "just fancy that."

The two then wandered slowly home.
His heart was full of pain;
He vowed in other lands he'd roam.
And ne'er come back again.
She dashed aside her golden hair,
And sang in merry tone:
"A brave heart wins a lady fair.
A faint heart conquers none."

Beneath the old oak's spreading reach,
She made him understand
How friends could have a finger each,
But he her heart and hand.
They found it then upon the ground.
Her crumpled broad-brimmed hat;
But to this day they have not found
The reason—fancy that.

*—Atherton Furlong, in Chicago Saturday Evening Herald.*

# FAIR PAPITA'S LEAP.

### Pursued by a Bear She Takes a Last Chance for Life.

**Brain is Killed by a Mountain Lion, the Lion is Shot by a Gallant Hunter, and Papita Bobs Up Serenely From Below.**

The Silver City (Mont.) correspondent of the Cincinnati *Enquirer* sends the following remarkable tale:

These mountains are as rich in adventures as they are in quartz-rock and big bowlders, he writes. Once in awhile one of the first is heard of beyond its immediate participants, just as the quartz now and then shows up a silver vein to the persistent inquisitive miner. Some of these have been duly chronicled, but not the tenth part of those which have happened, even within easy reportorial reach, have been heard of by me. A few days ago Hank Slicer, an old hunter, who fought the Indians long before he came up into the mountains ten years ago, dropped into our little mining camp, casually, as it were. The old man is garrulous, after he has taken on about a half a dozen three-finger doses of Bourbon, and he told half a dozen beautifully tinted stories of life in the mountains.

That is, the stories were rose-colored—a man with strong imagination and a slight prejudice against Hank might say they were "lurid." All of them were highly entertaining. Fortunately he had collateral evidence of the truth of some of them, though no one ever disputed any statement by Hank Slicer unless Hank was either asleep or out of sight and tolerably certain not to return for some time. One of his stories I shall give. It's a pity it can not be given verbatim and with all the ornaments of adjective and expletive, gesture and facial contortion with which it was duly embellished by the old man. But to do so would require a special fount of type with several new characters. Stripped of all disguises the story is about as follows:

Slicer has spent the summer camped on a spur of the mountains, thirty or forty miles from here, known as Big Tree Mountain. This spur is a wide one, and has many lovely little valleys and charming nooks. Its chief charm in old Hank's eyes, however, was the fact that its valleys and glens are the chosen feeding ground of the deer, and that its many pellucid streams are chock-full of the finest trout. With Hank was an old Indian, a half-breed, who, of course, took along his squaw and her incumbrances, a rather bright, copper-colored girl of fourteen or fifteen, three or four smaller fry, their number, ages and sex being quite immaterial. "Running Antelope" was his tribal name, though Hank always called him "Half-breed Jim" when referring to him in mixed society of which the latter was not a part. The two had known each other and camped together off and on for a score or more of years. This summer they must have had a particularly royal and hilarious time, with the squaw to do their cooking, the kids to do the chores, venison steaks running free and thick in their outdoor pantry, and trout fairly crowding around every hook that was thrown into the streams. Such a state of affairs means beatitude itself to an Indian family and an old Rocky Mountain hunter, and that it was enjoyed goes without saying.

One day, just about the time of our warmest weather here, when the blackberries in the scattered brier patches were luxuriantly ripe, old Hank had lazily strolled out with his gun and dog, ready for any thing which might cross his path. Nothing showed up, however—the day was an exceedingly sultry one in August—and the old man had turned his face toward camp, and was within two miles of it, when he came out upon a little opening on a southern exposure that was fairly well set in blackberry bushes, now bending under loads of ripe berries. They were tempting, and the old fellow leisurely browsed along the edge of the patch for some distance, picking only the biggest and ripest berries as he went. His dog had finally made a lazy excursion a little further down the hill to the right, nosing about in a perfunctory way and keeping half an eye on his master as he slowly moved along.

The day was as calm as a Sabbath in Eden; the heat was just enough to be relaxing; the air was soft and resinous and slumber-provoking. The old man moved slower and more and more felt an inclination to lie down and take a nap. He cast a glance ahead and saw that at the further side of the brier patch was a yawning canyon, perhaps five hundred feet deep, that seamed the mountain side for a long distance. Of course he must retrace his steps. He turned to do so. But the invitation of nature to take a siesta was almost irresistible. He had just picked out a nice spot in which to surrender—a bit of thick green moss under the shade of a tree and at the side of a big bowlder—when he was startled into the keenest life and the utmost activity by a scream, unmistakably from a female throat, and pitched at a keynote of the utmost terror. He turned toward the further side of the patch. There he saw the bushes in a state of violent agitation at two points, a slight figure in flight and a big black one in hot pursuit, while the screams kept up, and mingled with them were funny, short, sharp little yelps and a queer sub-cellar bass ejaculation that seemed half howl and half roar.

It was impossible for half a minute to tell what the mischief was up, and the old man, who had instinctively started toward the scene of the commotion at the first sound, kept his weather eye wide open and his finger upon the the trigger of his Winchester. Presently the figure of the screamer emerged from the brier bushes, and still under full headway, dashed over the open ground, covered with mossy rocks, that led to the edge of the canyon and Hank saw that it was Papita, the fifteen-year-old daughter of old Half-breed Jim, flying for dear life from a big cinnamon bear that was fairly making a swath through the briers in pursuit, and was now not more than two rods behind her. Both were going as if the Old Harry was after them, and, of course, it all happened almost in the flash of an eye. From the reckless way in which the girl ran toward the edge of the canyon old Hank was sure she either didn't know it was there or was so frightened that she had forgotten it. Instinctively he called out: "Look out thar, Peet!" the name by which the girl was known to him.

It was too late. The girl did try to check her speed or to turn to one side. Hank could not be certain which. He saw her cast a glance over her shoulder, catch a glimpse of the great, angry beast behind her, whose blood-red eyes looked death at her, and whose hot breath blew out threads of thick spume that almost reached her. She was then but a step from the edge of the precipice. With a gesture of despair the girl threw up her arms as she plunged forward, and leaping high into the air, she cleared the brink and disappeared into the yawning depths of the dark canyon with a wild shriek that fairly made the hunter's blood run thick with cold horror. He was near enough to hear her body strike and break the limbs of a tree whose top was just visible from where he stood, and then go, bumping and rolling down the rocky, almost perpendicular side of the canyon.

The whole thing was begun and over so quickly, and was so entirely unexpected and out of the common, that old Hank stood motionless for a few seconds, during which time the bear had halted by bracing on his haunches and fairly scooting along on the moss-covered rock, stopping at the brink and looking stupidly over at the abyss that had cheated it out of its prey. Just behind the bear came two cubs waddling along comically enough, every now and then making the funny little yelp that had at first been heard. The sight of them recalled the old man to himself. Up went his rifle, and he was just pulling the trigger when he remembered that if he shot the bear the carcass must fall over into the canyon and be lost. With a muttered curse, for the sight of poor Papita's death had made him bloodthirsty, he lowered the gun, to await the moment when the bear should turn around.

Just then occurred one of those unexpected things for which neither man nor bear is ever prepared. A mountain oak grew near where the bear stood and a little back from the precipice. A great limb stretched out toward the canyon, and from it descended by a tremendous spring a long, dark animal, lithe and sinewy, which lit full upon the shoulders of the unconscious bear with a thud. The shock was a heavy one, and the result must have been almost as great a surprise to the big mountain lion—for such the newcomer was—as to the bear. The impetus carried both animals over the brink, and at nearly the exact spot where the girl had disappeared a few seconds before. An instant later the sounds of a terrible conflict rose from the depths into which they had plunged, mingled with the hoarse growls of the bear and the wild, ear-piercing cries of the mountain lion.

Hank ran to the spot and peered over. As he did so the cubs slunk away into the bushes, and for once the veteran hunter didn't so much as look after a pair of fine young bears. What he saw below him he can best tell himself: "I never seed such a sight 'n my born days, ner heerd sich a growlin', ner kem acrost sich a clawin' an' scratchin'; y' see, th' varmints hed struck th' sidelin' trunk uv a tree what growed a piece below, 'n' it kinder throwed 'em catawumpus like back to'rds th' hill, 'stid o' down into the canyon, 'n' they'd lit in a sorter little flat spot atween th' tree 'n' the hill 'n' got wedged in thar, both flat on ther sides 'n' so clost tergether they cudn't git out noways—jess like packed in a box.

"Neither one had enny advantage, 'n neither one cud git out, so they staid thar'n fit. An' sich fitin'! Th' bar tried t' hug 'n cudn't git ahold. Hed t' Lite, 'n th' lion kep up sich a motion it uz discouragin' t' try. Th' lion' kep its hind claws agoin' like greased lightin', 'n every rake went through 'n fetched blood 'n gen'lly more or less meat. Course it didn't take long t' git 't the bar's inside fix'ns et thet rate. 'N all this time th' two kep up th' most owdacious howlins y' ever heerd. Reckin th' old mountin never heerd th' like afore. How long I watched thet fight I don' no; mought er ben ten minits; mought er ben two hours. Seemed like I cudn't keep my eyes offen 'em nohow. Finally th' lion managed t' squirm roun' some 'n kinder git on top. Then I seed th' fun uz most over. He jess nachully ripped up th' bar's belly 'n mighty soon hed it bout empty. Thet ended th' fight. But th' bar uz no slouch. Time th' lion uz got so fer aloug th' bar gits a hold on his nose 'n holds on like grim death, 'n gits his paws roun' th' lion's neck 'n hugs fer all he's worth. Arter while th' bar laid still 'n jess kicked once 'n awhile, but didn't let go neither hold. The lion tried 'n tried, but couldn't git loose. Then I kinder kem t' my senses 'n put a bullet in th' lion. He giv one screech bigger'n I'd heerd 'n giv a last kick.

"Then I begun ter scratch uv hed 'bout how I uz ter git thar carcasses out o' thar. They uz down 'bout fifty feet or more, n' no gittin' 'em up thet steep wall. Then I thought I' hev ter go down inter the canyon, eanyhow, arter th' body 'o thet pore Injun gal, little Peet, n' mebby I'd find a bit o' life in her yit 'n cud tell th' old folks sumthin' more cheerin' then thet last jump into eternity o' hers; when, Lord bless me, whadyer spose happened! Thet blamed little Peet herself poked her frowzy head from ahind a rock t'other side o' th' tree n' looked up at me 'n smiled, 'n nodded, 'n said, 'Peet all right.' Ef ye couldn't a' knocked me down with a feather, I'm a liar! I wuz never ez glad t' see ennybody afore in all my nachul born days. Cum t' inquire 'n luk into th' thing, it wusn't so blame wonderful. Th' gal 'd jumped right into the tree-top. Thet ketched 'er, 'n what I'd thought uz her a goin' down hill wuz onlya bit o' rock 't shuk loose 'n rolled down th' canyon. She'd slipped down out o' th' tree all right, an' jess got out o' th' way o' th two varmints when they kem down, too. She dodged ahind a rock 'n let 'em fight it out. She uz out blackberryin' when she run across the old she bar an' cubs on th' same arrant, 'n th' bar 'd tuk arter her. Peet's close wuzn't much when she got through them briers, but barrin' some scratches, the gal herself uz all right.

"They ain't much more t' tell. Peet found a way up, 'n I went down 'n' took off th' pelts 'n cut a right smart chance o'bar meat fer Peet t' carry 't camp, sted o' the berries she did't git. I've got both skins out thar, 'n here's one o' th' claws o' thet lion ter show fer the day's work."

The old man held up his trophy. If he is as veracious as it was ugly and sharp and wickedly suggestive, then there can be no doubt of the truth of his story of a very unique and thrilling adventure.

## ARTIFICIAL COLD-AIR.

**Houses to Be Cooled in Summer by Frost That Comes Through Pipes.**

The manufacture of cold is likely to become a large industry. Earlier efforts in the production of cold were toward the manufacture of ice. Later improvements were in the line of cooling-rooms, where products could be stored without the use of ice. This method has been in successful operation for some time in large packing-houses. It is less troublesome and less expensive than ice, but the process involves the use of brine with ammonia and a large outlay of money for a plant. This process is effective only in large concerns, and is limited to the production of moderately cold air, with the objectionable feature of dampness.

The newest process of refrigerating produces a dry, cold air that carries the thermometer many degrees below freezing point, and this degree of cold can be produced so cheaply and is so thoroughly under control that the world is promised the luxury of frost as cheap as heat or light. The concern in Chicago which controls this process is located on the West Side in a pretentious building. In one room they distill the ammonia, reducing the refuse product from the gas house to a pure liquid. This ammonia, known in the trade as anhydrous ammonia, flows in pipes to the cooling-rooms. This pipe enters the rooms and is distributed about the sides like ordinary steam pipes. The liquid ammonia is prevented from entering the pipes in the rooms, but through a faucet the gas or vapor which rises from the liquid ammonia passes into the pipes in the room. This vapor is what produces cold, and the degree desired is regulated by the amount of vapor that is allowed to pass through the pipes. The gas or vapor returns to the distilling-room with its freezing properties exhausted, and is made again into anhydrous ammonia, and is again used for freezing purposes.

Fruits are stored in a room cooled to the temperature of forty degrees. Meats for use in the near future are in rooms a little cooler, and game and delicate fishes for winter use are in the coldest room. In this department the thermometer registers twenty degrees below zero, and the game birds and fishes are frozen as hard and dry as it would be possible to freeze them in the dry cold air outdoors.

The practical uses to which this method may be put do not end with cooling and freezing rooms in a large establishment, for this pure liquid ammonia may be drawn off and carried to a residence in a receptacle something like a soda fountain, and from this the gas can be forced through a pipe in a refrigerator and make that storehouse as cold as may be desired. So far the process has not been used by families to any extent, but the production of the liquid ammonia is a matter of such trifling cost that a raid on the good housewife's kitchen is contemplated, and the company promise that the family refrigerator shall be furnished with dry, cold air cheaper than ice and serve the purpose better. Instead of the daily call of the iceman the cold air fellow will come around once in eight or ten days with his little tank of frost-producer, and after connecting it with the refrigerator pipe carry away with him the old tank of exhausted ammonia.

It is still further proposed to extend the usefulness of this process by making it a means of cooling residences. Pipes may be laid in the streets just as gas pipes are now laid, and as the liquid ammonia will not freeze it may be run into a residence just as gas is, and during the warm weather, instead of sweltering in a hot room the householder may turn a faucet and let the ammonia vapor circulate through the pipes around the ceiling of the room. No one need suffer in his house or office from heat when this point has been reached any more than he need now suffer indoors from colds. Pipes for a house-cooling plant are now being laid in Denver, and during the coming summer the plan will be thoroughly tested there.—*Chicago Tribune.*

## OLD MAN DUNDER.

**Although Not a Political Success, He Is Still an American Citizen.**

"Well! Well! But I thought you were in Germany by this time!" exclaimed Sergeant Beadall, as Carl Dunder entered the Woodbridge street police station yesterday.

"No, I doan' go. Maype dere vhas some flies on me—maype not."

"But you were discouraged the last time you were here; you had tried politics and got left. Perhaps you have struck something else?"

"Dot vhas it, und I shall shtay right here. I learn some new tricks, und I haf some chances to speculate."

"Tell me about it," said the sergeant, as he settled down in his chair.

"Maype you doan' like to hear from some greenhorns!" replied Mr. Dunder with an injured look. "If I vhas green ash grass und some cows feed on me, better I go home?"

"Come, go ahead. What new tricks have you got?"

"Vhell, sergeant," said the old man as he melted slowly, "dot trick I shpeak of vhas to wait until more ash ten loafers vhas in my place, schwearing und spitting und hugging the stove, und den put in a shtick of wood mit some powder in it und blow 'em oop. You neafer saw such schumping und running in your life. It vhas enough to kill you mit laughing. A stranger gifs me dot trick for two glasses of beer."

"You blow up the loafers?"

"Dot vhas it."

"But you blow up the stove, too, and perhaps your saloon. Can you afford to buy a new stove every time you want to play the trick?"

"Eh? Does der stoaf go, blow up, too?"

"Of course."

"H'm! I doan' think of dot petore. Of course der stoaf vhas blown oop mit der loafers, und maype der house vhas on fire."

"What else?"

"Vhell, I figure on some canary birds. I can buy 'em in Shermany for two shillings apiece."

"Yes."

"Und der price here vhas two dollar."

"Exactly."

"If I buys one million der profit vhas onfer a million und a haff dollars."

"I see. You want agents here and in Germany, and there is the cost of transportation, the loss by death, and you must find a million buyers. Splendid scheme, Mr. Dunder! I suppose you'll buy a steamer to ship by?"

"H'm! I get dot speculation for two dollars in cash. Vhas he wrong?"

"Oh no; go right ahead. Any thing else?"

"What if I buy oop all der oranges in der country for a million dollars?"

"Then you could advance prices fifty per cent. and make a heap of money."

"Shust so. I vhas glad you see it like me. Dot scheme cost me only tree dollar."

"But where is the million dollars to buy with?"

"H'm, dot's so. Oh! I remember now. I vhas to gif my note for one year. Dot makes her all satisfactory."

"What else?"

"Vhell, I goes in der railroad peeness, I guess."

"How?"

"In Mexico. If we build one hundred miles of railroad we get two million acres of land. Dot land vas worth twenty million dollar, und der income of der road vas fife millions a year. Here was der figures like some grease. Dot pointer cost me two dollar."

"Splendid idea, Mr. Dunder, why don't you buy the City Hall for $100,000 and sell it back to the city for half a million?"

"By Shorge! but dot was excellent! It was a wonder I doan' think of dot pefore!"

"And, say, you could buy up forty steamboats this fall for $20,000 apiece and sell them next spring for double the money."

"Donder und blitzen, but you vas a sharp man, sergeant! I doan' know you pefore. Shake my hand. How much shall I pay you?"

"O, that's all right, Mr. Dunder. You can always have my advice free."

"Und vhen I make two hoonered million dollars I gif you der best bank in Detroit for a present. Good-bye, sergeant, I see you quicker again ven I vas a millionaire."—*Detroit Free Press.*

## UNKNOWN SENSATIONS.

**Sir John Lubbock On the Problematical Organs of Sense.**

Sound is the sensation produced on us when the vibrations of the air strike on the drum of our ear. When they are few, the sound is deep; as they increase in number, it becomes shriller and shriller; but when they reach forty thousand in a second they cease to be audible. Light is the effect produced on us when waves of light strike on the eye. When four hundred millions of millions of vibrations of either strike the retina in a second, they produce red, and as the number increases the color passes into orange, then yellow, green, blue and violet. But between forty thousand vibrations in a second and four hundred millions of millions we have no organ of sense capable of receiving the impression. Yet between these limits any number of sensations may exist. We have five senses, and sometimes fancy that no others are possible. But it is obvious that we can not measure the infinite by our own narrow limitations.

Moreover, looking at the question from the other side, we find in animals complex organs of sense, richly supplied with nerves, but the function of which we are as yet powerless to explain. There may be fifty other senses as different from ours as sound is from sight; and even within the boundaries of our own senses there may be endless sounds which we can not hear, and colors as different as red from green, of which we have no conception. These and a thousand other questions remain for solution. The familiar world which surrounds us may be a totally different place to other animals. To them it may be full of music which we can not hear, of color which we can not see, of sensations which we can not conceive.—*Sir John Lubbock, in Popular Science Monthly.*

## AN UNWELCOME CALLER.

**A Woman Opens the Door of Her House and Finds a Leopard There.**

In an Indian bungalow every bedroom has a small anteroom attached, in which the important function of bathing is performed, writes a lady traveler in India. The floor is of cement and uncarpeted, to allow of splashing, and around the tub are placed the ghurras or earthen pots of water, which are required for the bath. The little room has always two doors, one opening on the outer hall to admit the bheesti with his supply of water and the other opening into the bedroom. One evening just as dusk was falling I had finished the unpacking of a box in my bedroom and was moving away when I fancied I heard a slight sound in the bathroom. It was an unusual hour for the bheesti's visit, so I opened the door, and, to my horror, saw just in front of me the beautiful sleek back of a large leopard, which was crouching on the floor and drinking out of one of the ghurras. The room was so small that I found myself quite close to the leopard, and could, indeed have touched the spots on its glossy coat from where I stood. I was too frightened to move, and stood perfectly still; and fortunately for me, the outer door by which the creature had entered still stood wide open, and with a single bound it cleared the threshold and disappeared up the hillside. Had the door blown to, or been closed from the outside by a servant, the animal would have had no resource but to seek an exit by the doorway in which I was standing, and the knowledge of my narrow escape made us careful ever after about shutting up early in the afternoon.

A few nights later we were awakened by hearing the watchman call out loudly that there was a leopard in the veranda; and we ran to the window in time to see the waving of the branches where the beast had sprung out among the trees. The bearer, who was lying rolled up in the blankets in the same veranda, slept soundly on meanwhile, unconscious of his proximity to the stealthy-footed creature. These leopards are cowardly creatures, and will never attack a human being if they can avoid it; their special fancy is for little dogs, and they will so haunt the neighborhood of any house where dogs are kept that the greatest care is necessary to prevent the little quadrupeds falling victims to the big ones.

As the weather became better they grew less bold, and it was only toward the end of the season that we saw them again. When snow fell on the farther hills they were driven to seek food lower down, and then again they began to infest the station. Often in the month of October, when coming home late night, I have heard the hoarse sort of purring noise they make as they rub their sides, like huge cats against the trunks of trees. The men carrying my dandi (light palanquin) would then step out, and talk loud to keep up their courage, while the mate would flourish his lantern and shout. No leopard would come near so noisy a party, and the only danger on such occasions is of the men taking a panic and dropping the dandi, when the situation would be awkward. This, however, never happened to me, and I was equally fortunate when riding.—*Chicago Tribune.*

## LAKES THAT DISAPPEAR.

**But the Settler Is Warned That They May Appear Again.**

Southeastern Oregon is almost a terra incognita yet, except to cattlemen, swamp land-grabbers and people of that ilk. In the numerous law-suits between swamp land men and settlers who have taken up claims on the alleged swamp lands, there have been many instances of persons swearing in direct opposition to others in regard to the character of land which would lead unbiased persons to suppose that flat perjury had been committed.

There may have been no idea or intention on the part of any of the witnesses to testify falsely in these cases, as the following will show:

Warner Lake, in Southeastern Oregon, is a shallow body of water covering a large amount of land. It is divided by low ridges of land into three or four divisions. Last year a gentleman cruising through that country found one of these division to be a lake eight miles long and four miles wide, and from four to five feet deep. This summer the same gentleman visited that section and found this lake totally dry and drove his team across it without trouble. He is now prepared to swear that the site of the lake is suitable for cultivation, whereas last year he would have sworn with a clear conscience that there was a lake there.

Last year Mr. Neil had a contract to make a survey of the meander line of Warner Lake, which he did, and this year Mr. Martin, a Government inspector of surveys, visited Warner Lake to inspect the surveying done by Mr. Neil. He found the work all right, but it did not conform to the water line in that part of the lake above mentioned.

Responsible parties who were at the lake when Mr. Neil made his meander, confirmed its truthfulness as to the water line when it was made, and Mr. Martin became convinced by their testimony that a wonderful change had taken place.

The probable cause of the disappearance of this large body of water is the light fall of snow in that section for several years past, as all the lakes in that section are lower than ever before since the settlement of the country.

It will hardly be safe to settle on the bottom of a dried up lake or close to low-water mark, as in case of a long hard winter, with a great fall of snow and late rains in the spring these lakes will likely expand themselves to their original size.

The fact that the lakes in that section are of this character is probably the cause of all the trouble and misunderstanding in regard to swamp lands.—*Portland Oregonian.*

—At a Buffalo "half off" sale it was proven that cashmere worth sixty-nine cents per yard was sold for ninety-three cents by placing it on the "bargain" counter. Things are not always what they seem.

## FARM AND FIRESIDE.

—Thirty minutes spent in cleaning up a team in the evening, may mean an hour's gain in time the next day.

—Do not forget to take care of the tools and farm machinery as you cease to use them for the season. They represent money and you can not afford to allow them to be ruined for want of care.

—If one wants all the milk that can be gotten from a cow, without reference to its quality, juicy grains, green corn fodder, brewers' grass, turnips and roots having a large proportion of water in them, warm mashes and sloppy food in general will produce it. A fair proportion of substantial food is necessary to produce rich milk.

—Spinach and carrots are not injured if stored outside in mounds, and in sections where the winters are not so severe they may be left in the rows, with a slight covering. The proper way to store them, however is in a cellar, in bins, so as to easily handle them when they are wanted for feeding.

—If the farm be on low, wet land a proper system of drainage is of the first importance, and when so drained such a farm—other circumstances equally favorable—pays on an average a larger yearly profit than upland or hilly farms. Excessive wet weather may ruin the crops on the low farms, but not the crops and land too, as is often done on the other.

—Those farmers who have fat cattle for sale should by all means let them go if they can get a satisfactory price. If by keeping them a few weeks longer for a better price a few dollars may be gained, how much will be spent in the extra feeding? The common experience of stock feeders is that there is more profit in feeding good lean animals than in continuing to feed stock that is ready for sale and waiting for a little better price that may never be secured.

—Oyster Sauce: Drain the liquor from one pt. of oysters. Melt two ozs. of butter in a sauce pan, stir into it one oz. of flour and add to this by degrees the liquor from the oysters. When the mixture boils throw into it the oysters and boil all together until the leaves of the fish begin to shrivel. Throw in one-half teaspoonful of pepper, one-half teaspoonful of salt and one saltspoonful of grated nutmeg, and, having boiled one-half pint of milk in a separate saucepan, stir it in also; then remove the saucepan from the fire at once or the milk will curdle and the sauce be ruined.—*Toledo Blade.*

—It is a well-known fact that soda spoils lawns and parterres. They should be washed in tepid water, without soap, save just enough dissolved in the water to render it smooth and easy to use. Wash and rinse as expeditiously as possible, turn and starch in thin boiled starch, in which you have dissolved enough white soap to make it a trifle sudsy. Dry in the shade and iron on the wrong side. Should the articles have a figure of some bright hue which is liable to fade, a generous handful of salt will prevent it, by using it in the rinse water.—*Portland Transcript.*

## POULTRY MANAGEMENT.

**The Proper Way of Ventilating Hen-Houses in Winter.**

In all poultry houses constructed I have advised no ventilation whatever in winter, other than the air that finds an ingress to the openings into the yard (which openings should be closed at night, or when the doors or windows are opened). In summer a ventilator tube may be used, to let off the warm air (it is not always foul); but in winter, while the doors may be open during the day, at night the house should be closed as tightly as the rooms we sleep in, for the chances that human beings will suffocate will be greater than that hens will. Since trying the no-ventilator plan I have been more successful, and having persuaded others to try it, I can show evidence that the birds thrive better and seldom have roup. It is the cold air coming down on the birds, or flowing freely around them, that causes so many cases of roup, canker, etc., and if the poultry house has no ventilator to let out the warm air, thereby creating a draught, I will venture to say that where one bird is lost by suffocation or foul air, a dozen will be saved that would otherwise die from too much fresh air. Try it.

As to foul air, there should be none. No experienced poultryman ever allows his poultry house to get in a condition to produce foul air, as it is regularly cleansed, while the cold prevents fermentation of the droppings of an single night. As to the carbonic acid gas exhaled, it is one of those myths that never materialize. True, it is there, but enough air comes in, and enough gas goes out, to prevent danger until morning. I have yet to find the suffocated fowl, or any injured by a close, warm house; but the victims of the ventilator tube are legion, and every winter finds their number increased.

I know it is an arduous task to attempt to have the ventilator tubes abolished from all poultry houses, for the more roup and disease the firmer the belief that more cold air (*i. e.*, more cause of roup) is needed, and boxes of pills, with all sorts of gargles and washes, are resorted to in order to undo the mischief of freezing the poor fowls with cold drafts, instead of having them snug and warm. I can not imagine how the poultry-house should be an exception to the dwelling-house, stable, and other habitations of animals. It is better to knock off a whole side of the poultry-house, as no drafts are thereby created, but the hole in the roof is murderous. A dozen hens, weighing only 20 pounds, are allowed more ventilation than a cow weighing 600 pounds, and more consideration is usually given the location of the ventilator tube than in the arrangements of the house. I hope readers will close all ventilator holes this winter, for experiment, and trust to the fresh air coming in without attempting to few it in, and, my word for it, those that do so will be surprised to note the difference between the damage done by ventilator holes and the success obtained by tightly closing them.—*Rural New Yorker.*

## SCIENCE AND INDUSTRY.

—Paper treated with a mixture of camphor oil and linseed oil becomes waterproof.

—Girls are beginning to look toward dentistry as a field where their wits and industry may win a fair reward.

—The vanilla bean grows wild in Mexico, and, fresh from the forest, sells at ten or twelve dollars per 1,000.

—Prussian blue is got by fusing horses' hoofs and other refuse animal matter with impure potassium carbonate.

—It's well known that there are absolutely no genuine chamois skins in the market; but, notwithstanding, an English firm is manufacturing a new cloth in imitation of the imitation skins. They will be just as good as the real skins, it is claimed, and will be sold as imitations.

—With Edison's new phonograph tubes are fitted to the compositors' ears and connected with the instrument, which is set to talking or stopped by a pedal arrangement. The phonograph talks off a sentence into the printer's ears, and when these are full he stops the machine until he has transformed the words into type.

—In the ordinary sixteen candle-power incandescent lamp, according to Prof. Ernest Merritt, only from four to six per cent. of the energy actually expended is available as light, the remainder being wasted as heat. To lessen this waste is one of the greatest electrical problems now awaiting solution.

—A noted French scientist has reached the conclusion after numerous experiments, that the most brilliant displays of the aurora borealis occur at an elevation of not more than thirty-eight miles, while a pale glow may possibly be produced as high as eighty-two miles, but that no auroral discharge is possible at a height of 124 miles.

—Oil of peppermint in vapor diluted even to a part in 100,000 will kill cockroaches in an hour, they dying in convulsions. One drop of the oil placed under a bell-jar covering a cultivation of cholera bacilli will kill both bacilli and spores in forty-eight hours. It is also regarded as among the best surgical antiseptics, and of great value in phthisis and diphtheria.

—Dr. Richardson, of London, who has given great attention to the subject of human food, says that "neither the teeth nor the digestive system of man is adapted properly for animal food, nor for a purely vegetable diet, but for one of fruit." If man is to be classed according to his adaptation to any particular kind of food, he should not be called a flesh-eating or a vegetable-eating, but a fruit-eating animal.

—Concussion of the brain is scientifically defined as "being, in a physiological sense, a sudden and more or less complete arrest of the brain's mental and physical functions, brought about by external violence. In every case of injury to the head the brain is made to vibrate more or less forcibly. When the vibrations are feeble the injury to the brain structure thence resulting is but slight; when they are severe the mischief may be great."

## FROGS AND SNAKES.

**Some Facts From the Snakery of the King of Oude.**

The late King of Oude had built a snakery in the gardens of his palace at Garden Reach, near Calcutta. It was an oblong pit about thirty feet long by twenty feet broad, the walls being about twelve feet high and perfectly smooth, so that a snake could not crawl up. In the center of the pit there was a large block of rough masonry, perforated so that it was as full of holes as a sponge. In this honeycombed block the snakes dwelt, and when the sun shone brightly they came out to bask or to feed.

His Majesty used to have live frogs put into the pit, and amused himself by seeing the hungry snakes catch the frogs. When a large snake catches a small frog, it is all over in an instant, but if a smallish snake catches a larger frog, so that he can not swallow it at once, the frog's cries are piteous to hear. Again and again I have heard them while out shooting, and have gone to the bush or tuft of grass from which the piercing cries came—sometimes in time, sometimes too late to save poor froggy though the snake generally got shot. As a final story let me tell how a frog has been seen to turn the tables on the snake.

Two gentlemen in Cachar some years ago saw a small snake seize a small frog and attempt to swallow it. But suddenly a large frog jumped forward, seized the snake's tail, and began to swallow the snake. How the affair might have ended can not be told, because my friends impatiently drew near to watch the combat, when the frogs and snake took alarm, and the big frog disgorged the snake's tail, and the snake released the little frog, and they all scuffled off. But the tale is perfectly true, and both the gentlemen who saw it are still alive; and I only regret that it was not my good luck to see the affair with my own eyes.—*Longman's Magazine.*

**Chinese Have No Nerves.**

The North China *Herald* says the quality of "nervelessness" distinguishes the Chinaman from the European. The Chinaman can write all day, work all day, stand in one position all day, weave, beat gold, carve ivory, do infinitely tedious jobs for ever and ever, and discover no more signs of weariness and irritation than if he were a machine. This quality appears early in life. There are no restless, naughty boys in China. They are all appallingly good, and will plod away in school without recesses or recreation of any kind. The Chinaman can do without exercise. Sport or play seems to him so much waste labor. He can sleep anywhere—amid rattling machinery, deafening uproar, squalling children and quarreling adults. He can sleep on the ground, on the floor, on a bed, on a chair, in any position. It would be easy to raise in China an army of a million men—nay, of ten millions—tested by competitive examination as to their capacity to go to sleep across three wheelbarrows, hand downward like a spider, their mouths wide open and a fly inside.