

FACTS AND FANCIES.

Busy, thirsty, noxious fly, We're at war, sir, you and I! Once the pest let you sup Freely from his brimming cup: Now we know you carry germs— Nevermore can we make terms! Leave, I warn you, my domain, For I'm planning a campaign! Sticky paper's out of date, Screens too off you penetrate: But I'll summon to my aid Weapons that you can't evade, I will spread a poisoned bait, That shall lure you to your fate: Subtle fumes of formalin Shall destroy you and your kin! I will catch you in a net, Cunning traps of wire I'll set; Germicides I'll spray around— Not a corner shall be found Where a hungry fly can feed, Not a nook where you can breed, Filthy, germ-infested fly, Warning fair I give hereby— We're at war, sir, you and I.

—New York Tribune.

OFF THE TRAIL.

There are not in our country any of the caste distinctions which prevail here are creditably informed in the annals of the Atlantic Coast States. One person is as good as another, if he be not better. Yet a man has, perforce, to be a man to win a place in the community. Small time is vouchsafed for the amenities of life, but there is, notwithstanding, a certain ceremony proper to occasions, and one does well to observe it.

Reserve is to be cultivated above all things. It bespeaks the strong nature. What more clinching proof of immunity from flightiness than squatting beside a stranger half an hour without giving utterance to a syllable, while one whittles on a stick and stares thoughtfully at nothing? Such procedure marks with sureness a man of solid judgment, one whose self-respect compels aloofness. It may lead, too, in course of time, to mutually informing dissertations, such as: "Them clouds look like rain. Do you reckon?"

"No-o. See those ol' dust-spurts? It never rains when they start to rollicking." After that, if one be shrewd, he will relapse into stony gloom, still whittling. Perhaps the only patience will not be proof against this stoicism, and he may weaken to comment on the outlook for the calf crop, or why prices for cattle do not increase with the retail quotations for meat. And then, of course, he is delivered into your hands; for garrulity is unardonable in a man of diffidence. One can be civil, and it is not amiss to proffer courtesy in season, albeit one must proceed warily in this direction. But woe unto diffidence! It is a step down from courtesy. It indicates an individual's sense of unworthiness, and men are prone to make it for a cowardly spirit. Now, when a man feels and tacitly acknowledges that he is not the equal of the next, what is the use of living? Diffidence usually gets in cowland what it gets and merits elsewhere—scorn and imposition.

That is why Hudspeth frowned at the stranger nervously fidgeting on the threshold of the ranch office, and employed a tone he dared not have used with one of his own men.

"No, I have no job for you. This country is overrun with nesters already. They never do any good. Good day." He turned his back and fell to work on a cattle tally which was somewhat vague owing to his wagon boss's system of computation. Hardin never failed to put down at least half the figures of a day's count, and then, through tenacious memory the remainder, arrived at the total by mental arithmetic. It is a serviceable method, but confusing to any one not in the secret.

"I'm right sorry, Mr. Hudspeth, sir," his caller said humbly. "We done come a powerful long ways, and Goldie is ailing." "Uh-huh," said the cowman. "Yes."

"Could I buy some flour and bacon here, Mr. Hudspeth, sir?" His voice was highpitched and cracked, and his gaze rested on the manger with the anxiety of a faithful dog. "We ain't got but a lil' piece of money but if you can spare any—"

"No," the manager flared, "you can't. Do you think I'm running a store for this whole country? But you can go to the cook and tell him I said to let you have a side and ten pounds of flour. I'm busy. Good day."

The traveler remained where he was, staring hesitatingly at Hudspeth's back. Perhaps he wanted to thank him and gratitude choked utterance; or it may be that he had other petitions to advance. His lips opened to speak, but he toyed with his hat instead, coughing in confusion.

"Well?" snapped the man at the desk. "Yes, I'm a-going, Mr. Hudspeth, sir," the other cried. "Don't get mad, Mr. Hudspeth. You're kind to me."

He let the screen door go with a bang, and hurried toward the bunkhouse in immense satisfaction. A whole side of bacon and ten pounds of flour for nothing! Truly the brave days of the West were returning, and Mr. Hudspeth was a right kind gentleman. The manager watched his jerky progress with a grim smile. In it were revealed the man's whole life and character. How many such had Hudspeth seen—those alert, uneven steps, now advancing swiftly, now dragging in indecision—only a minute firm with resolve, the next stumbling where there was nothing to impede. His caller slowed visibly when he neared the quarters of the Anvil men.

The hoodlum wagon stood in the angle formed by the blacksmith-shop and bunkhouse, and into it were being loaded supplies for the outfit encamped at Black-water on the beef round-up. Dave superintended the operation, and he was perspiring copiously. His breathing was distressing to hear.

"The boss done said as you could have a side of bacon?" he repeated, grunting over a keg of horseshoes. "Well, I swan! If Hudspeth ain't loosed, 'Consnarn this kaig! Ain't you going to take it, Al, or do you aim to keep me holding it this way all night?"

This visitor was prompt to relieve Dave of his burden, and began to help with feverish energy. The cook only stared at him by way of thanks, being unimpressed. He had seen similar frantic outbursts of short-lived industry many times in the course of a variegated

career. A naturally indolent man always goes at a set task harder than the steady workman, probably because he wants to get it over with. Dave glanced at Al and grinned.

"What's your name?" he inquired. "Banty," was the reply. "Ed Banty." "Is that your wagon down by the windmill, Mr. Banty?" asked Al. "Yes, sir. Did you get a squint at that lil' mare, Mr. Al? She's shore a dandy. She's drug us clear from Mexico without a day's rest. Never trots a step. Just walks and walks. I swan, she does walk out with that wagon."

They placed the last can of molasses in its niche, Dave turned to the kitchen. If the manager saw fit to donate the ranch supplies to every tramp nester that passed, it was, of course, his own business; but, next time Dave requisitioned for more flour, Hudspeth need not throw up his hands and inquire how many extra families the cook was keeping and what intimate personal relation he bore them.

"I'll help you to carry it down to the wagon," he volunteered. "Is that your woman, Mr. Banty?" "Yes, sir. Yes, Mr. Dave, that's my Goldie. She's ailing some, but I reckon this climate'll soon set her right."

"It shore will," Dave said. "This here climate'll put whiskers on a pig." Three of us were loafing the day at headquarters, fresh from delivery of a bunch of mixed stuff—cows and calves and steers—to a railway co. Wentractor had espied the wagon, but it would have been bad manners to exhibit curiosity by a call, especially during the absence of the owner. Now, however, we seized bucket and repaired to windmill, being reminded that, at Dave's age, he should not be obliged to carry water this considerable distance.

"That were you going with them buckets?" he shouted at us wrathfully. "We figured on helping you, Dave. Don't you want us to?" "You're powerful polite, ain't you?" sneered the cook. "You-all be sure to leave them buckets in the kitchen, now. That wagon loot done stole three off'n me already."

The Bantys had the usual nester outfit—a canvas-topped wagon, some blankets, a few pots and pans, an ax, a spade, and a dog. The dog was old and wheezy and hoarse, and spent his days in diligent searching after fleas.

We were hugely surprised at sight of Mrs. Banty, having looked for a frowsy woman, vaguely rotund as to shape, with a fine, hearty voice and a carelessly gratified appetite for snuff. Yet here was a neat, trim, shrinking creature, certainly not of those fitted to bear the bludgeonings of the wilderness. Indeed, she was nothing but a wisp of a woman—frail, with sunken cheeks and frightened eyes. One could not possibly imagine her dipping snuff, or even raising her voice above a monotone. She was gathering sticks and dried broomweeds for a fire when he came up, and, instead of sitting down to watch her, as custom ordained, Dave and her husband hastened to assist. We pretended not to notice this display of extravagant politeness, and filled her buckets and pots with water. In the midst of these operations she straightened and clapped a hand to her left breast. Her lips tightened in pain, but she contrived to smile reassuringly.

"Got another spell, Goldie, girl?" Banty inquired. "Yes," she answered faintly. "It happened that Dave knew full well what it was to have sudden alarms of the heart, because whenever Dave ate more than a few pounds of beef at a meal and then attempted with the undue haste to scoop water from the spring, his vital organs would whir and flutter and utter other alarming feats. Therefore, he was deeply sympathetic and evinced a desire to discuss symptoms with Mrs. Banty."

"I find that a lil' touch of rye, ma'am—" he began. "We're temperance folks, Mr. Dave," her husband cut in, aghast. "That so? So am I," said Dave, with a foolhardy forgetfulness of us. "Leastways, I ain't against temperance, so long as you don't carry it too far. But a scoot now and then won't hurt any man."

"I take a pinch of baking soda," murmured Mrs. Banty shyly. Apparently recovered from the seizure, she set herself to slicing bacon, and then mixed a pan of bread.

The mare of which Banty had boasted grazed near by, cropping the sage-grass. She was a lean, wiry animal, and showed unmistakably the effects of an unbroken haul of a heavy load. As she was nosing near me in quest of a succulent tuft, my attention was attracted to her head. Around and between the ears, the hair was eaten away in patches, evidently through the action of an acid.

"When did she have blind staggers?" I queried. "You mean those marks on her head? You done guessed it right. But I cured her, though she was like to die on me once. Weren't you, ol' sweetheart?" "Pears to me she's liable to drop any time," Reb opined. "That mare ain't cured."

"Shut up, Reb," Dave rebuked. "Shore she's cured. Don't you mind him, Miz' Banty. Reb never had much sense anyway, and since his hoss fell on him, he's took bad at times."

"My horse never fell on me," Reb protested hotly. "Look a-here, Dave, if you say that ag'in—"

"Where are you—all bound, Mr. Banty?" the cook resumed. "It ain't the first time either, Dave." "We aim to cross the desert and work over into southern California," said Banty.

"No, sirree; it ain't the first time you done said that, Dave." "That's a mighty long ways," remarked the cook, "mighty long. It's a hard journey for you, I reckon, Miz' Banty; ain't it?" "Oh, I'm used to that," said the little woman.

"And if you ever say it ag'in, Dave," Reb concluded, "I'll bust you wide open." "Hello, Reb," exclaimed the cook, in pleasant surprise. "When did you get in? I swan, we thought you were on the round-up."

but fan it; it fires their souls as the lure of gold tempts prospectors. And on their heels come the plodding farmer, who goes patiently to work to wrest a living out of the claims they have abandoned. The wakers, some morning, to find that civilization is knocking at the door and he is rich.

Banty had tried raising maize close to the Nations. No; the climate did not agree with him and his wife. "I liked it, Ed," she protested. "But it wasn't doing you no good, Goldie," he said. "I could see that easy."

He had nothing to say against the climate. It was a good enough climate, but its effects were far from satisfactory. In consequence they had disposed of their acres to migrate to the Panhandle. All that was years ago.

"That land is selling at twenty dollars an acre now," I observed. "Twenty dollars! I swan! Do you hear that, girl? This gent'lman says they're paying twenty dollars an acre for that plains land," said Banty, his eyes glittering. "We done sold our'n for three dollars. If we'd only waited!"

"Yes," his wife sighed; "it's too bad. And we done lost that nineteen hundred dollars in New Mexico, you recollect, Ed?"

Indeed, he did. Banty wagged his head over the inscrutable ways of the jade Fortune, and murmured, "Well, well, who'd have thought it?"

This was a worn-out tale to us, one of little meaning. Nesters came and nesters went. If they did not go soon enough we sometimes furnished the impetus; for, of course, the Southwest was intended by the Creator to be a cow country, and it is an iniquity that agriculturists should win it for corn and cotton and other mainstays of life.

Banty had fenced a quarter section near El Captain Mountains, and, with this as a base of operations, had put his nest-egg in sheep. But the sheep had divided over a cliff on a night of rocking storm, and there was none to prove what, or who, propelled them. Much good would it have done him could he have proved it. So once more he had gathered his scant belongings into a wagon to set out for that Promised Land.

"This is the last time; yes, sir," cried Banty, in his excited cracked tones. "Where we're going now they say it's a regular Garden of Eden, what the Good Book talks about. All you have for to do is to stir the ground, and some you've got a crop. Six cuttings of alfalfa in a year; yes, sir."

"And don't forget how calm and peaceful it all is, Ed," Goldie spoke up. "Don't you mind how Brother Dukey said they were corn fields? He said no man's hand was lifted against his neighbor, Brother Dukey did."

"Huh-huh," Dave grunted. He had given the recital his most earnest attention, and now he shook his head reprovingly.

"That's just the way it is every time—the way you done. It's what I've been telling these boys here for ten years," he declared. "Birds of a feather gather no moss."

"What's that you say, Mr. Dave?" "A rolling stone gathers no feathers," Dave corrected sternly. "You-all know what I mean."

It was near the dinner hour, and we departed, after Reb had given the travelers minute instructions as to where they might expect to strike water in the desert. He was extremely dubious over their preparedness for the venture. Reb was not much of a talker, but he would survive it, and said as much on our way back to the bunkhouse with the buckets. At this the cook emitted a scornful laugh.

"You make me tired," he told Reb fiercely. "Of course she will. That lil' woman is all right, clear through." After that he had eaten, the wayfarers packed their utensils. There was no especial need for haste, and they did it slowly, Banty relieving his wife of whatever tasks he was able to perform. She appeared listless and tired, but when he insisted upon making a couch for her at the bottom of the wagon, she smiled at him brightly; she was never proof against the shuffling of corn in a box, though experience had taught her it was a heartless snare. While he harnessed, Banty talked to her, much as one would draw in an infant from whom a reply was out of the question. He noticed that her eyes were rheumy, but it might be only a touch of cold, and he did not care to alarm the "girl." Soon he began to pour a cowboy night-herd song:

"Oh, bury me not on the lone per-airie, Where the wild kites will howl o'er me, Where the rattlesnakes hiss and the wind blows free, Oh, bury me not on the lone per-airie."

"Ed?" "What is it, girl?" "Ain't it odd that we don't ever seem able to get settled? Settled down for good and all, I mean." She was lying in the wagon.

"I can't see you worry, Goldie, girl. We'll strike it rich some day," he comforted. "It's right queer, but I've got a feeling that this is the last move." "Oh, do you think so, Ed?" "That's what I do, girl. There must be some place where we can find rest and peace and happiness. There must be some land like that."

the desert. The sun smote the sand and blinded us. Our horses moved lifelessly, coughing. All day, and the day before, it had been the same—brown wastes, chocolate wastes and the terrible, smarting white of the alkali. And ever the sandhills and the sage-brush and the cactus; cactus and sage-brush; or perhaps a stretch of powdery sand, with flat stones giving back the glare. We rode tight-jawed against the dust lifting about us in sullen clouds.

"What a place! What a place!" Reb muttered, and reckon this was meant for hell, and the Lord done good merciful and changed his mind. What do you think?"

We covered another five miles in sweating silence. "Do you recollect of Banty and his wife?" said Reb, again. "Think of bringing a woman out here! Do you mind how they were always talking—"

"Talking of what?" "Of a land of peace and plenty?" he asked, grinning through split lips. "This is a right fine country to look for in it, I swan!"

We struck a wagon trail after ten minutes' riding, and halted. No wagon should have gone that way. It was far off the track of travel, dangerously removed from water, unless one knew the desert paths as we did. Reb looked at us, and then at the marks of the wheels.

"One horse," he said, clearing his throat. "Some fool has tried for to take short cut."

"Got any water?" He shook the canteen that was slung from the horn of his saddle; it was full. We veered to the right and followed the wanderer's trail. The skeleton of a dog lay beside a cactus, and there were buckshot in the skull.

"Uh-huh," said Reb. "Somebody done his mongrel. Bit by a rattler, probably. It pears to me I've seen that dog before."

"Don't be a fool," I said angrily. We took up the thread again. It was sinfully hot, and I was sick. We did not look at each other. Directly in our path was the carcass of a horse, the sightless eyes and bare teeth uniting in a grin at us. Buzards had stripped it to the hide and bones. A wagon, canvas-topped, settled mournfully in the sand. Reb approached it very slowly.

"Hello, in there," he called. There was no answer, and he called again. Then he shoved his head inside the flap—abruptly, like one who fears what he may find. The wagon was empty, save for some blankets, and an ax and a spade and a few cooking utensils. There was nothing to be said, and we went forward. Before us, very clear in the sand, were prints of feet—two pairs of them, side by side.

"There ain't any water that way," croaked my companion. "Come on," I said. A mile, and one set of foot prints vanished. At this point the sand bore the impress of a body. But the larger marks led on; only they were deeper now. Soon we saw that they dragged—oh, so wearily. A wide indentation in a heap of dust seemed to indicate that the two had rested there; then the long uneven foot prints wound along, curving about the sandhills.

"God, he's carrying her ag'in," said Reb, in a whisper. "Carrying who?" I snarled. "Shut up!" They led in a huge semicircle now, and we came to another spot where the pair had been compelled to pause. Here they were again, but they were deeper now, for night would soon shut down. Suddenly Reb pulled in.

"Look," he said. "Look." Some one had traced letters in the sand. It is a familiar story in the west country, that in the madness of thirst, the traveler will rave and sing and scrawl appeals for help where help can not reach; but Reb and I had scoffed at such tales as old wives' gossip.

"What is it?" he mumbled. "You read it, I can't seem to see, somehow." Slowly I spelled out the words: "O—P—E—R—A—T—O—R." They ended there. My comrade's hand clutched my shoulder and fluttered out, pressing the muscles of my back. "Say something," he begged. "Say something."

"I can't." "It's all right. That's what I wanted to be sure of. You're real. Let's go on. Hurry!"

And then we found them. They were lying close to some sage-brush. Evidently they had stretched themselves there to sleep, because he had placed his coat over them. We shook up, and night fell. Banty had his arm under his shoulder and his head was pillowed on his breast. So calm and serene were they that at first we thought they had slept. No carter bird or beast had ventured to disturb their rest.

"What's that in her hand?" Reb asked. "She was clasping a tiny wooden horse, a battered, foolish toy, sadly torn of limb. It had been little Ed's dearest treasure—little Ed, of whom she could think without crying."

And, as we gazed, my pity fled. For they had found what they always sought. They had gone to their Land of Peace.—By George Pattullo.

FOR AND ABOUT WOMEN

DAILY THOUGHT. Live for something, have a purpose. And that purpose keep in view; Drifting like a helpless vessel, Thou canst ne'er to life be true. Half the wrecks that strew life's ocean, If some star had been their guide, Might have long been riding safely— But they drifted with the tide.

This party was given for a girl who was to take a trip abroad. The usual cards were sent out, except that they bore in the lower left-hand corner the sentence, "Please wear something to represent a city or a country." The cards were then placed in the tiny, inch-wide suitcases that are sometimes used for candy boxes, the name of the girl for whom each case was intended being fastened to the handle, like a baggage tag.

When the guests arrived, each wore an emblem, as requested. A girl in bright green was easily recognized as Ireland. Another, with a picture of a galloping horse and a strawberry, represented Canterbury. A gondola stood for Venice, etc. The guests were given pencil and paper to write and guess the places which the various people represented. Two rewards were given—one for the best representation and one for the most correct list of guesses.

A geographical game came next in order. With the company seated in a ring, the winner gave the name of a city, mountain, river, lake or anything else geographical, located in any part of the world. The next player then had to supply a name beginning with the final letter of the given word, and the third in turn gave one beginning with the last letter of the word mentioned by the second, etc., as for example: Mississippi, Ireland, Dover, Rochester, Russia, Albany. Each player, as his turn came, had to give his word within half a minute, or drop out of the game. The one who kept his place longest was the winner. Any player could at any time challenge any other player to locate the place he named. If the player challenged could not comply, he had to pay a forfeit, which was redeemed later.

After this, the girls began to tell the story of the adventures in store for the traveler. One of the girls began the story, making it up as she went along; then she stopped, and the girl at her left took it up, stopping at a certain point for some one else to go on, until every one had contributed.

The room where refreshments were served had been beautifully decorated. The national flag was festooned about the chandelier over the table, which was lighted by means of candles with crepe paper shades. The centerpiece was a bowl of water on which a toy sailboat floated, bearing on its prow the name of the traveler's steamer. Narrow ribbons of red, white and blue led from this to the corners of the table. On entering each girl was given the name of a country and had to seat herself by finding its flag. Pretty silk ones, laid at each place, did duty both as placecards and as favors. Toy suitcases were again used to hold small presents.

At the end of the meal a much belated suitcase was brought in and placed before the traveler. While the company hummed "Auld Lang Syne," the guest of honor unpacked the bag and found such gifts as a pin roll, bathroom slippers, a collar bag, etc., all of which would prove useful on a journey. A clever verse, attached to each article, was read aloud.—Pictorial Review.

Braids will play an important part in the trimming of tub frocks for the warm weather, and indeed they deserve this popularity, since no trimming is smarter or more easily applied, according to the Pittsburgh Sun.

Perhaps the newest of these are the openwork mercerized cotton varieties, some of which closely resemble the square meshed file lace, without the embroidery, however.

These new white mercerized braids vary in width from an inch to three inches and come in all degrees of weaves, the most open being one made in meshes an eighth of an inch square and this has all the appearance of crocheted lace.

There are new ecru braids on the same order also, and generally these can be used like lace, the goods underneath being cut out.

Of course, there is the white cotton banding embroidered in colors, but the new braids are much less expensive, ranging in prices according to width from 8 cents to 30 cents.

Ball fringe is by no means new, but there are numerous modifications of it this year. In one instance instead of the small round crocheted balls there are tiny cones suspended from small pieces of twisted braid, an inch piece alternating with a piece an inch and a half in length.

There are cotton and linen fringes in all widths also, but these are not so practical for the tub frocks, since they are very troublesome, when being laundered and never look quite as neat as before wearing.

The braided banding is another novelty in this line which will find favor for summer frocks. This comes in varying widths in white linen on which a design is carried out in soutache braid.

The new figure ought to be the satisfactory solution of an oft-discussed and very differently regarded question, for as it is decided that naturalism shall be the accepted vogue, the old threat of the wasp-waist's return becomes banished.

There is another eminently satisfactory aspect of the matter. The acceptance of the natural figure means that instead of moulding the bodies of all into a more or less close copy of one ideal, to each is given the respect due to the individuality, and it becomes the dressmaker's duty to secure for it the elegance it possesses.

A very renowned designer asks the ingenuity upon whose behalf a long and successful experience is concentrated to abandon the corset altogether, and to satisfy themselves in lieu of it with a satin sheath that in no way interferes with the supple grace of their young frames.

Fruit Salad.—Soak half box of gelatine in a generous pint of water, add the juice of two lemons and two cups of sugar. Bring to a boil and strain. When cool pour over two sliced oranges, two bananas, half cup of cherries, half cup of English walnuts (meats) as nearly whole as possible. Stand on the ice till it sets. Serve with whipped cream.

FARM NOTES.

A good liniment for all kinds of swellings on dairy cows, as well as on all other farm animals, is made by mixing equal parts of turpentine, sweet oil and spirits of camphor. Apply liberally and frequently to the swollen parts.

Bees are the only producers known to husbandry that yield a profit without cost of feed. They find their own pasturage. They multiply so rapidly that they more than pay for the small initial expense of housing them, and the first cost of equipment is almost trifling.

The character of the mole's teeth show that he belongs to the carnivorous class of animals, and, though at times he may take a little vegetable food, his regular diet is undoubtedly the larvae of insects and earth worms. Place before one of them a cutworm and see how fiercely he will attack it.

The surface mulch of all small fruits is very valuable, especially with berries. Success with small fruits, whether things being equal, lies in keeping the soil clean and moist during the fruiting season. A good mulch of straw or other litter along the rows will hold the moisture in dry weather and promote heavy and perfect fruiting.

The mare in foal may be worked moderately up to foaling time, when she should have about two weeks' rest. Allow her and the foal to run on hill or dry land pasture. When again put to work she should go slow for a few days, till she has had full time to regain her normal strength and hardness of muscles. Rushing horses of any kind never pays.

The question of "building up the old farm" may best be summed up by quoting Professor Cavanaugh, of Cornell Agricultural College: "When the farmer learns how to conserve the ammonia of the urine and manures, and by growing leguminous plants for plowing under to increase the nitrogen or vegetable matter of the soil, then only will our farms be brought to their highest productiveness."

There are two elements which cannot be ignored in the building up of healthy and profitable live stock—namely, sunlight and ventilation. The one is just as important as the other. They go hand in hand. No matter what other aid may be given toward the maintenance of animals and their preservation in good health, sunlight and a good system of ventilation cannot be overestimated.

The old method of stabling in cellar barns is now practically out of date, especially where the winters are long and severe. Even at its best ventilation in these cellar barns is imperfect, while, as to sunlight, it is out of the question. Surely such an arrangement for stabling dairy cattle is undesirable, even from a health standpoint and on their milk.

An underground stable on elevated dry soil might do well enough if properly constructed. A door 10 or 12 feet wide could be left open and reached by cutting down and carting away the soil to the breadth of the stable, and then building a stone wall on each side of the entrance out to the level ground or nearly so. On the south side have a windbreak of stone or timber erected 15 feet beyond where these stone walls are built, such windbreaks to be 12 feet long and running due east and west, and each of which should be six feet long, running southeast and the other southwest.

This would be an admirable underground shelter for growing stock. Young stock properly fed and cared for will, as a rule, be able to stand out in the open for themselves. Otherwise there should be a continuous supply of fresh air, but care should always be taken to have such barns or stables perfectly drained.

However, underground stables are not to be recommended, as a rule. In unsatisfactory ventilation dairy cows are vitiated, unless special care is taken, as mentioned above.

To do their best dairy cattle need an evenness of temperature in a barn. It should be neither too hot nor too cold. When required to stand in a barn that is extra warm get up a box of water, or a moist dew—would it be unnatural for them to become chilled? Under the action of such a change they would fail to drink sufficient water.

Small matters of detail like this may account for much of the trouble met with in the management of dairy cows. Ventilation and sunlight will aid every class of stock, but just at the time there is the least of either in a convenient form is just the time in which dairy cows are allowed the shortest time out of doors.

For the special plea for sunlight and fresh air for this class of animals, in particular, a first-class ration for a dairy cow, and a first-class cow to partake of it, will give the best results when she has first-class, comfortable accommodations, with sunlight and thorough and judicious ventilation. When this is more thoroughly understood there will be less coughing and tuberculosis.

Proper disinfection is another matter that must be carefully looked into. The disinfection of stables is given special consideration in a bulletin issued by the United States Department of Agriculture. According to the author of the bulletin, the best means of application and the best disinfectants to use are not generally known. As a result most of the work is carelessly done, so that it is not unusual for contagious diseases to reappear after disinfection, thus causing many to lose faith in its value.

Sunlight is one of the most valuable aids to disinfection. Disease germs cannot live long when exposed to the direct rays of the sun, and for this reason the providing of plenty of window space is the first step in barn sanitation. The next should be the removal of all dust, cobwebs and the closing of cracks in which germs may lodge. But this cleaning up and the providing of sunlight is only an aid in the destruction of germs. The final steps must be accomplished by drugs correctly and thoroughly supplied.

There are many such drugs or chemicals on the market, some of which are of the highest value, others being useless. One of the best is corrosive sublimate, a deadly poison, but wonderfully effective. Another very useful disinfectant is formaldehyde, used either as a gas or a liquid. Chloride of lime and carbolic acid have been much used in the past, but are now giving way to cheaper and more effective chemicals, and there are many grades of coal tar sold commercially, all of which are more or less effective.