LIVE STOCK

PURE-BRED CATTLE ARE BEST

To Be Successful Little Details Must Not Be Overlooked—Keep Up Records of Animals.

A well-selected breed of pure-bred cattle is a source of much pleasure as well as profit, but to be successful details must not be overlooked. Many breeders and beginners are too careless. They keep no accurate records of births, neglect their cattle, fail to keep up the records, do not take proper care of their cattle in winter, and are often caught with a lot of surplus and unmerchantable bulls on hand and no buyers. Let me add that the only way to dispose of surplus stock is by judicious advertising in some good farm and stock paper, says a writer in an exchange.

Keep your herd in nice, healthy condition, so you will not be ashamed to show your stock to prospective buyers. Make a yearly exhibit at a few leading state and county fairs and present your stock in the most attractive form at home, as well as at the fairs. In describing your sale stock to prospecti[illegible]

A Pure-Bred Hereeford.

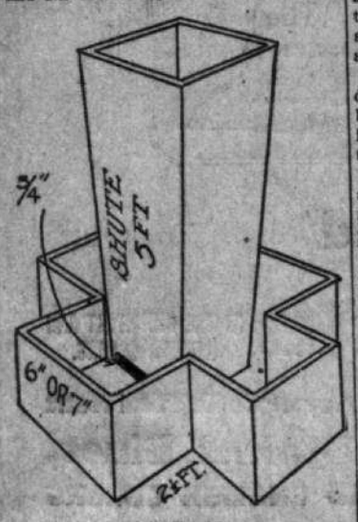
buyers, by mail or otherwihe, never overestimate the merits of an animal. Make good every statement, and make every buyer a friend. It is cheaper to retain your old customers than to hunt new ones.

There is no better way to restore or keep up the fertility of your soil than by keeping a herd of beef cattle, saving and applying the manure. A liberal supply of both grain and rough feed should be grown and consumed by the cattle. They should be kept well-bedded in the barns and all strawstacks converted into manure and returned to the soil. A well-bred animal will not consume as much food as a scrub, and will always sell at a profit, even if sent to the butcher. The best individuals will bring a fair profit to the owner when sold for breeding purposes.

SAVE GRAIN IN FEEDING HOGS

Two Troughs Conveniently Arranged That When Corn Is Devoured More Will Follow.

Make two troughs six or seven inches wide and two and one-half feet long. Fit these troughs together so they will cross in the middle, writes J. E. Spencer of Mount Pleasant, Tenn., in the Missouri Valley Farmer. Make a chute five feet high, large at the top and six inches square at the bottom,



Self-Feeder.

to fit into the cross of the troughs, leaving it three inches from the bottom of trough. Shell your corn and pour into the chute. As the hogs eat the corn in the trough more will fall down. The hogs' feed is clean, and no corn is wasted.

Weaning Pigs.

Before the pig is taken away from its mother to be weaned, it should have the eating habit well developed. It should be developed so well that, taking away the mother will not interfere in the least with the pig's growth. Of course a pig knows well enough when his mother is gone, and he cannot nurse but must get his feed in his trough. It is a fact that when they know how to eat, and are fed regularly, taking the mother away will annoy the pigs for about one day, and the trouble is all over.

Raising Early Lambs.

The sole object in raising early lambs is to produce a fine animal of good size and flesh and get him to market at the earliest posible moment. To do that requires good feeding, good care and good management from the time he is born until he is sent to market.

Shelter for Swine.

Swine like a little sunshine but they ought not to blister in the summer glare for want of a shed or some shelter on the hottest days. Such a shed should have a good tight roof, too, and should not be turned into a slimy wallowing place.

Gentle Work for Mare.

Gentle work for the mare with foal will not harm her, but she should not be worked for a week before foaling.

HOLD ON TO GOOD BREEDERS

Pigs From Large-Bodied, Old Sows Number More and Often Double in Size When Farrowed.

(By J. W. INGHAM.)

Sows should be retained for a number of years until their places can be filled with their equals.

It is well known that the progeny from mature parents are superior to those descended from young progenitors not fully developed. Boars and sows for breeding should be kept in a good thrifty condition but not fat.

The writer has always been troubled to keep his breeding sows from becoming too fat and consequently farrowing a small number of scrawny pigs.

I once took a large sow to fatten for one-half the pork. I did not know she was with pig and fed her all the corn meal and wheat middlings she would eat.

Imagine my astonishment and vexation when she had three little dwarfed pigs—not only smaller than pigs usually are when first farrowed, but emaciated.

Sows for breeding should not be allowed to run with the fattening hogs fed on corn but kept in a pasture by themselves and given a plentiful supply of slop made of equal parts of wheat shorts, corn meal and wheat bran.

Most young sows will breed when three months old if allowed to run with a boar, but eight or twelve months is as young as is judicious to breed them.

The pigs from large-bodied, old sows will be more in number and frequently double the size of pigs from young sows when farrowed, and this with the same feed and care and will frequently weigh 50 per cent more at a year old.

Not only this, but it stunts or dwarfs the growth of such young things permanently and they never attain good size.

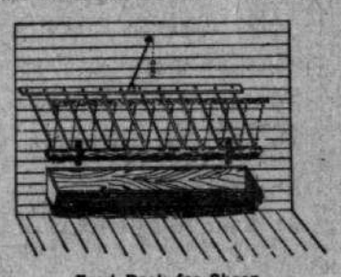
GOOD FEED-RACK FOR SHEEP

Grain Trough Placed Beneath Saves Chaff and Leaves, Most Nourishing Part of Feed.

(By J. W. GOODWIN.)

The rack is made with a pole for the bottom rail and a piece of 2x6 inch scantling for the top rail. The crossbars are pieces riven from an old piece of timber.

These crossbars are four feet long and about one and one-half inches in



Feed Rack for Sheep.

diameter, shaved smooth with a drawing-knife.

The holes in the top and bottom rails are made with an inch-auger. The crossbars are trimmed to fit the holes and then wedged to hold them

The bottom rail is held in place against the side of the barn by two strips of heavy sheet-iron which has been bent to fit around the pole.

The top rail is secured by a piece of half-inch rope which passes over a pulley located in a hole in the wall above the rack, a weight being attached to the outside end of rope, serving to always keep the rack against the wall.

When the hay is put in, the rack is drawn down, and when filled is pushed back against the wall, holding the hay in place closely and kept in place by the weight.

The grain trough placed beneath and in front of the rack serves as a receptacle for the chaff and leaves of the hay—the best and most nourishing part of the feed which would otherwise be pulled under foot and lost as food.

Watch Unshod Colts.

Unshod colts need inspection of the feet occasionally, as they are likely to grow more on one side than the other, or to develop too much toe. A very little rasping will keep the feet leveled.

Value of Corn Silage.

Corn silage is no less valuable for carrying stockers and feeders through the winter months than for fattening and finishing beeves.

LIVE STOCK NOTES

Good cattle require good care and feed.

Pick out a side with a good disposition.

Pigs should be grown on pasture as nearly as possible.

Never raise a colt from a naturally vicious-tempered mare.

A couple of sheep in the front yard are as good as a lawn mower.

Hog cholera in Kansas is under control, at least for the present.

Cough affecting young pigs very often is due to dusty bedding.

Never save a sow for a breeder unless she has a large number of teats.

It is absolutely necessary that the stallion should have plenty of exercise.

Pasture and exercise develop a strong frame that responds quickly to feeding.

The boar should be an ounstanding individual, possessing all the markings characteristic of the breed.

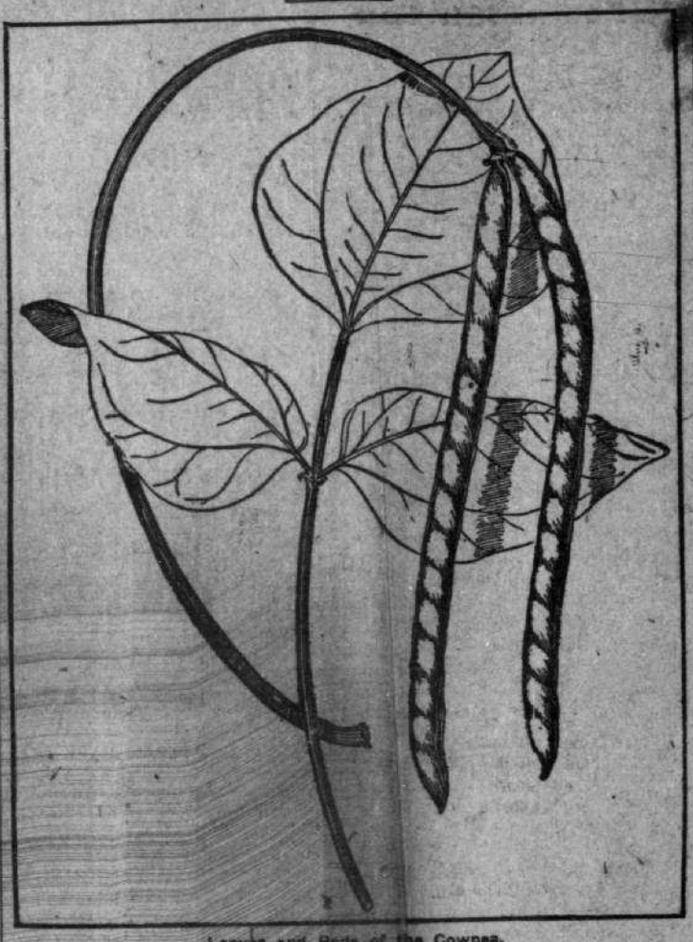
Some owners of land in the far west claim they can raise 14 sheep to the acre on alfalfa and beet pulp.

The stable that has plenty of pure air and is well flooded with sunshine is most comfortable and healthful.

A pure bred ram of the coarse wool breed crossed with Merino ewes produces a good lamb for early fattening.

The flesh condition of a sheep cannot be judged by looking at it. Always go over a sheep with the fingers, examining every part of its anatomy before sending it to market.

EXCELLENT CROP FOR PLOWING UNDER



Leaves and Pods of the Cowpea.

The practice of green manuring, or plowing under of certain green crops especially for this purpose, is one of the oldest systems of fertilization at present in use, though in this section only one or two particular crops have been utilized for this purpose. While it has been long known that the cowpea and many other leguminous plants possessed in a most marked degree the capacity of collecting and assimilating large quantities of the chief fertilizing constituents, and particularly, nitrogen, nothing has been definitely known as to the causes underlying their remarkable properties as nitrogen collectors until within quite recent years.

The amounts of nitrogen assimilated by the pea and similar plants on rather unfertile soils were frequently so greatly out of proportion to the available supplies of nitrogen in these soils, that investigators had for years sought to determine whether or not these plants possessed the power of assimilating the free nitrogen of the atmosphere. The researches and experiments of a number of German investigators, extending over a long period of years, have shown that leguminous plants are capable of taking up and assimilating the nitrogen of the atmosphere, and this property is known to depend upon the presence of bacteria or minute microscopic forms of life, which are found in tubercles or excresences occurring quite profusely upon the roots of thrifty and vigorous plants, and plants of this character.

Certain particular bacteria are found to be peculiar to certain specific plants, and plants grown in a soil destitute of the organism peculiar to them are observed to have few if any root tubercles.

By adding to the soil in question, small amounts of soil from land on which similar plants are observed to develop root tubercles, it will be found that the plants grown on the former soil will also soon have tubercles grown upon their roots, and at the same time, the growth of the plant becomes vigorous and rapid.

Since nitrogen is the costliest element of plant food and is constantly becoming scarcer and dearer so far as its commercial forms are concerned, it will be readily seen that a system of green manuring which provides a means for the collection of this valuable element from the atmosphere and a medium through which it can be stored up for the use of the subsequent crops, is of the highest importance and utility to the farmer.

Experiments conducted at the experiment station several years since, showed that a crop of pea vines, grown on a sandy loam, of only moderate fertility, contained the following amounts of phosphoric acid, potash and nitrogen (calculated from actual analyses) per acre:

	In vines. Lbs.	In roots. Lbs.	Total. Lbs.	Value.
Phosphoric acid	39.05	6.90	45.95	$2.30
Potash	83.79	18.12	101.91	1.02
Nitrogen	115.54	7.70	123.24	20.95

The values are calculated according to our scale of fertilizer valuations, and it will be seen that the value of nitrogen alone, exceeds that of a ton of ordinary complete fertilizer, while the nitrogen is equivalent in amount to that contained in 1,750 pounds of cotton seed meal, though this crop was considerably above the average yield.

In addition to the advantages derived from turning under a crop which has a peculiar adaptability to securing plant food from the air, and from the soil and soil water, such a crop supplies an immense mass of organic matter to the soil. This organic matter, when transformed into humus, improves greatly the texture of the soil, makes it more retentive of gases and moisture and enables it to better withstand drought, while at the same time the presence of a good supply of humus aids in rendering the insoluble plant food of the soil more available.

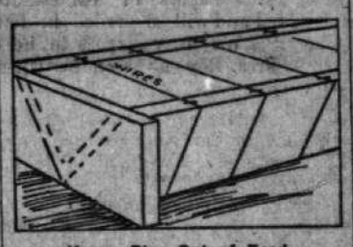
Other leguminous crops can be used to advantage for soil improvement, and at the Alabama experiment station at Auburn, excellent results have been secured from the use of velvet beans, crimson clover, vetch, etc., as renovating crops. The velvet bean, for example, was found to yield on one acre of very mediocre land a crop containing 201.2 pounds of nitrogen, this amount being about equivalent to that supplied by a ton and a half of cotton seed meal. Crimson clover on an acre of similar land gave a yield of crop containing 143.7 pounds of nitrogen, while hairy vetch gave a crop containing a total of 202.8 pounds per acre.

By taking advantage of the fact that the growing and harvesting periods of certain leguminous crops fall in different seasons of the year, these crops can, of course, be employed quite profitably in a number of different rotations.—Alabama Experiment Station Reports.

KEEPS PIGS OUT OF TROUGH

Oklahoma Man Prevents Swine From Getting Into Their Feed by Using Smooth Wire.

To keep pigs out of their feed trough I take large smooth wire, fasten at one end of trough with staples and wind round and round the trough, leaving spaces about 5 inches apart



Keeps Pigs Out of Feed.

between wires and fastening securely with staples to prevent slipping, writes C. B. King of Cogar, Okla., in the Missouri Valley Farmer. The same plan also works well on chicken feed boxes, as it keeps the chickens from scratching out their feed.

Shelter in Summer.

A protected tight roofed shelter should be afforded the pigs even in the summer, and sleeping quarters should be dry. Yards ought also to be kept disinfected with lime, carbolic acid or some other purifier and kept in as sanitary condition as possible. Troughs may well be thrown out of the yards and washed out thoroughly with lime water once a week.

Order Fruit Packages.

Order fruit packages early, for there is going to be a great scarcity in some lines. This is especially true of barrels and bushel baskets for peaches.

POULTRY IN WARM WEATHER

Precautions Should Be Taken to Keep Down Mites and Disease Germs of All Kinds.

The roosts should be sprinkled once a week with kerosene oil and once a week with creoline or carbolized water to keep down mites and disease germs of all kinds.

Paint nest boxes about every ten days or two weeks with a mixture of one gallon kerosene and one pint of creoline or carbolic acid in its crude state. Keep the yards and houses clean. Use plenty of good whitewash. Give plenty of pure, fresh water frequently during the warm days. Use porcelain, granite or earthenware vesels and keep them clean by scalding out at least twice a week. This is a very important item and should be looked after.

A few drops of kerosene or carbolic acid in water once a week is good and helps keep off diseases. Dust the birds frequently with good insect powder. You must keep your eye on the birds through the hot weather and see that everything is kept scrupulously clean. It will take but a little time each day, but don't get in the habit of attending to things today and leaving off tomorrow. You can't be successful in this way.

Cause of Chicks Dying.

The greatest cause of chicks' dying is general physical weakness. This loss of vitality may have been caused by some unknown weakness in the parent stock, improper keeping of the eggs, or faulty incubation. Weak chicks are either small or late-hatched, they possess little vigor, and though they may live for days will slowly die despite the best efforts of the poultryman. When chicks are in this condition, it is of little use to attempt doctoring or giving special care, for in most cases the results will be the same.

ORIGIN OF FAMOUS PHRASE

Belief that Common Political Term Sprang From a Horse Race Held in Tennessee.

The political term "dark horse" is thought to have had its origin in the following circumstances:

In the last century there lived in Tennessee a "character" named Flynn, an elderly person who dealt in horses. Flynn generally contrived to own a speedy nag or two for racing purposes if he could arrange for "a good thing" during his peregrinations throughout the state.

The best of Flynn's flyers was a coal black stallion named Dusky Pete, almost a thoroughbred and able to go in the best of company.

One day Flynn visited a town where a race meeting was in progress. He entered Pete. The people, knowing nothing of the horse's antecedents and not being over impressed by his appearance, backed the local favorite heavily against the stranger.

Just as the beasts were being saddled for the race, a certain Judge McMinamee, who was the "oracle" of that part of the state, arrived on the course and was made one of the race judges.

As he took his place on the stand he was told of the folly of the owner of the strange entry. Running his eye over the track the judge instantly recognized Pete. "Gentlemen," said McMinamee, "there's a dark horse in this race, as you'll soon find out."

He was right. Pete, "the dark horse," lay back until the three-quarter pole was reached, when he went to the front with a rush and won the race.

DISSOLVE BONE IN THROAT

Use of Lemon Juice at Critical Time Is a Thing Worth Keeping In Mind.

Sitting at a planked shad dinner in Yonkers, a laughing guest drew a bone into his throat and he began to strangle. Some one suggested that the sufferer swallow a fragment of dry bread.

"Oh, no," exclaimed an Ossining man. "Don't give him bread. It might catch the bone and it might not! Give him something that is sure to give relief." Beckoning to a waiter, he said: "Bring me a lemon, cut in two." And it was brought without delay. Taking one section, he offered it to the choking guest and told him to suck the juice and to swallow it slowly. Directions were faithfully followed, and in about a quarter of a minute the afflicted one placed the half lemon on his plate, looked into the anxious faces around the table and smiled.

"Well, Joe," said one, "how about it?"

"It's gone," was the reply, "the bone has slipped down."

"Not exactly that," said the Ossining man. "The bone slipped down, all right, but it was melted first by the citric acid. I never knew it to fail to dissolve a fishbone. You can test the power of lemon juice by dropping some on the fishbones you may have lying on your plate."

Several diners tried the experiment. In each case the acid reduced the bone to liquid gelatine.

Fawn and St. Bernard as Companions.

At the little village of Bauma, in Switzerland, a farmer recently found a young fawn in one of his fields.

Fearing that if left alone without its mother some mischief would befall it, he took it home and did everything possible for it. Now, he happened to have a large St. Bernard dog, and this dog and the fawn took to each other.

The fawn slept in the dog's kennel, and when it grew a little older and went out on its walks abroad, the dog accompanied it, and defended it against the attacks of other dogs.

Sometimes the St. Bernard and the fawn would be absent in the woods and fields for a whole day, but they always returned at night, the doors and gate being left open for them. The fawn is now much taller than the St. Bernard, and yet the dog still goes out with it.

Aid to the Unlovely.

"I try to be an efficient city directory," said the hotel clerk, "but balk at recommending a beauty doctor to women guests.

"That is one of the first things they want to know. Churches, theaters, even dressmakers can wait a few days, but the beauty doctor is an immediate necessity. Unfortunately, they do not get much satisfaction out of me. Any number of beauty specialists leave cards for distribution, but so many of them have been mixed up in lawsuits that I feel squeamish about delivering their cards. To satisfy my own conscience and the women at the same time I hand out a bunch of advertisements with the remark that I guess they are about all alike.

"Then they can pay their money and take their choice, and if they lose their hair and complexion, they can't come back on me for damages."

Largest Flying Fish.

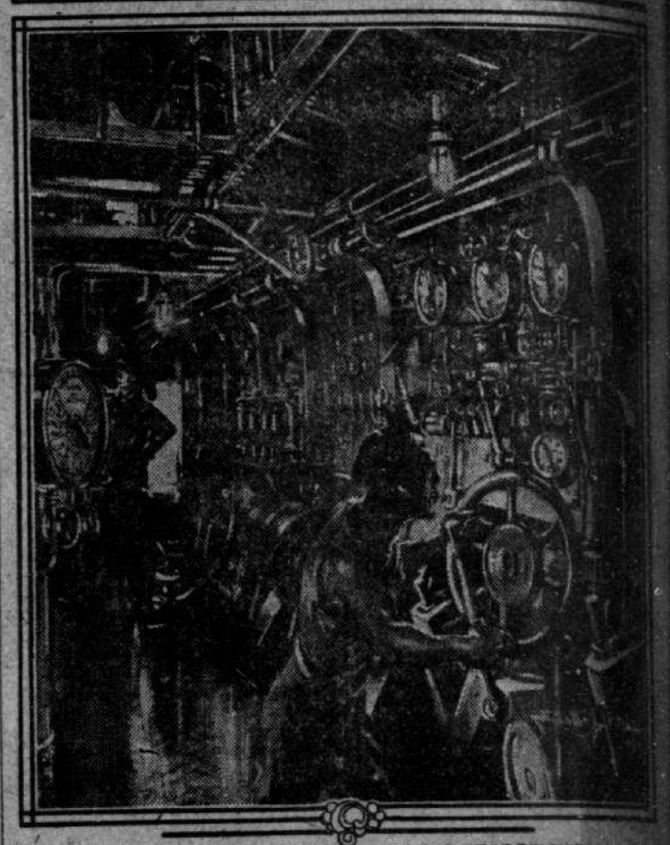
The largest flying fish on record was served up for breakfast on the British warship Ardeola a short time ago. The Ardeola was homeward bound and was off the Canary Islands when a large school of flying fish was observed. They were apparently in full flight from some deep sea enemy and traveling rapidly. As the ship met and passed them several flew on board and were seized by the crew as welcome additions to the mess. One of the fish measured 19 inches; the largest flying fish ever seen before the Ardeola's catch have never exceeded 10 inches. The big one was fried for the captain's breakfast. Flying fish are very palatable and taste like trout.

The Quarrel Over the Laundry.

The family laundry had just been returned, and the usual struggle to identify their respective belongings was on. "That's my shirt!" insisted the elder brother, who worked in a printing establishment. "I can tell it by the ink spot."

"Pahaw!" exclaimed the younger brother, who worked in a lumber yard. "I suppose, in order to be mine, it would have to have slivers in it."—Judge.

Men in the Engine Room



STARBOARD ENGINE OF A MODERN LINER

FREIGHT on a sailing ship from New York to London used to be 14 shillings a quarter of wheat; now it is just over a shilling a quarter by steamer from New York to Liverpool. Not all of the engineering which has brought about this result has been done in the drawing office and the factory. Much of it has been done by workingmen who took the raw inventions out to sea, struggled with their crudities and put the needful improvements into the minds of the designers ashore. In big ships and little the process is going on and it is a stern one still in spite of modern refinements. In the old days, when boiler pressures were so low that a steamer had to slow down to raise enough steam to whistle with, an upholstered settee was often provided in the engine room for the use of the man on watch, so that he need not stand more than was absolutely necessary. Today it is probable that not one seagoing vessel could show such a thing. A man who cannot walk about for four hours in the temperature of a Turkish bath is not wanted now.

While the ship is at sea all the engineers except the chief keep two watches of four hours each in the twenty-four. The same man always has the same hours. The third engineer takes the 12 to 4 a. m. and p. m. watch, the second takes the 4 to 8 and the chief's watch, 8 to 12, is taken by the fourth engineer, or by the donkeyman, if there are only three engineers carried. In this case the chief is always within call. The duties of watch-keeping largely lie in seeing that this or that does not happen. As well as the main engines there are the pumps and other auxiliary machinery and the boilers always seeking to go wrong if given a chance. Then in port all hands are busy with the adjustments that have been noted down as necessary while the ship was steaming, and these entail the handling of tremendous weights with hand tackle only. Such work does not seem very formidable, perhaps, but seagoing engineers know that Commander Willetts, U. S. N., spoke truly of their work when he told the American Institute of Naval Engineers that "it requires the most strenuous and exacting attention of any known pursuit, and, while requiring skill and intelligence to accomplish well, it has to be performed under such severe stresses and in such dirt and heat as to rob it of all interest except in its speedy completion.

In the Silent Hours.

An engineer does not readily forget his first voyage or that first night in the "graveyard" watch (12 to 4 a. m.) when he sat on a bucket to consider the novelty of his surroundings and revile the heat, and woke up from a few seconds of troubled sleep to find the chief engineer vigorously kicking the bucket away from under him. In a few weeks he becomes ashamed of wanting to sit, even in the tropics; but he has not conquered human weakness even then, for after a few voyages nature will have provided him with the trick of sleeping while he solemnly paces the engine room. Usually this only happens after a spell of exhausting labor, such as is consequent on breakdowns, and usually it only lasts until he walks into the boiler-room bulkhead and wakes, feeling foolish and uncanny, after, perhaps, fifteen seconds of jerky somnambulation. Then he learns to keep a bucket of cold water handy to dip his head into, and the same intelligence that contrives this antidote warns him that it were unwise to mention the circumstance in the messroom. Indeed, a hint of even feeling sleepy is as horrifying to the ear as the smell of a heated bearing is to the nostril. A hot bearing once smelt is never forgotten. It is not by any means an overpowering smell—just burning oil—but to the man on whose watch it occurs it reeks of certain disgrace. When he has eased the engines and hears the other engineers warned by the change of speed, coming tumbling down the ladders, while he is frantically searching for the source of the smell he would give five years of his life to undo the oversight of the last five minutes.

Discipline in the merchant service begins well enough at the top, but it does not work all the way down. It stops at the lowest grade of man who has a certificate to lose, the junior engineer. In the evidence at a recent nautical inquiry one read of a man smilingly informing the court that he was ashore having a last drink while he should have been on board joining in boat drill. A junior officer or engineer dare not do such a thing. The law and the owners deal severely with him. He is supposed to behave with naval obedience himself, while his own authority is frequently flouted by those nominally at his command. Anything less like the navy could scarcely be imagined. The idea that engineers are given to chastising firemen with any handy weapon is often found in fiction. It is fiction. In real life discipline below decks depends almost entirely on the good nature of the men.

Surroundings Are Degrading.

Socially the merchant service engineer is equally remote from the naval type. His accommodation does not often rise above the level set by [illegible] clothed tables and kitchen [illegible]. Such conditions have not an ennobling effect on the intellect. His conversation in the messroom is commonly personal and bitter. If he comes from the "upper middle classes" his relatives too often find him morose [illegible] or vulgarized, or disappeared altogether from their ken. If he resists the social influence of his environment the result is often a curious mental combativeness which seems to arise out of the well nigh incompatible requirements that he is supposed to meet—an artisan with supposedly the prestige of a lieutenant and actually less authority than a corporal. The best educated men strive to rise above seafaring. Examinations must be passed and they can only be entered by men with a certain amount of service to their credit. Twelve months at least must be passed at sea to enable a man to go up for a second class certificate of competency—that is to say, the certificate which legally qualifies him to act as a second engineer [illegible] on a very small ship as chief engineer. After obtaining that he must serve in other year as engineer in regular charge of a watch on board an ocean going steamship before he may sit for his first class certificate, which enables him to sign on as chief engineer of any sort of vessel, from an excursion steamer to the last thing in Atlantic flyers.

When he is "up for second" he has to pick out the answers to questions about, say, the temperature of the bearings well under imaginary and distressing conditions dear to the hearts of examiners, from mixed memories of nocturnal laughing nights ashore and [illegible] days of anxious vigilance over racing engines, when the propeller would be flung clear of the wintry waves of the ocean and the ship quiver as though from earthquake. When he is "up for chief" he is set more difficult questions, but still not beyond the reach of simple arithmetic. If he aspires to the honorary examinations—"extra chief" it is called—the questions become more academic, and he must know the brain cell which contains the [illegible] gral calculus. The calculus is probably stored next to visitors of the most important objects which it is to achieve for him—a surveyorship, superintendentship ashore, a little home in Forcst Gate or [illegible] Shields, and wifely companionship broken by voyaging, or perhaps the protection of a widowed mother.

Built Ships in the Woods.

In Colonial days the shipping of our home trade and for sale abroad was built chiefly in the district of Maine and in New Hampshire. These two colonies built rather more than one-half the entire American tonnage in the days immediately preceding the Revolution. The older ports could not compete with the new settlements amid the timber.

When the great trees had been exhausted on the river, parties of shipwrights went a mile or two into the forests, and here on the virgin lands they would build a vessel of 100 tons or more, mount her on strong sledges of timber, hitch on a team of 200 oxen and drag it in one haul, pull over the snow to the frozen surface of a navigable stream.

Such a team of oxen would be a quarter of a mile long, and it fell to the teamstership of a major [illegible] to start them all at once. This was called "raising them," and [illegible] once done nothing must stop them till the ship rested on the ice.

She's Wearing It Now.

"But don't you think this [illegible] suit somewhat—er—a trifle [illegible]est?"

"I don't know. That is what [illegible] fashionable people are wearing this year."

"That so? Then I'll take it. I can overcome my modesty, but I [illegible] can overcome the handicap of being unfashionable."