THE BOY SCOUT.

The little Boy Scout goes marching out In a khaki suit of tan, And a broad felt hat with a silver cord Just like a grown-up man. He feels so big as he swings along In step with the line of boys, That he knows he never again will cry Or play with his childish toys.

The little Boy Scout is only eight, And his eyes are blue and bright; His mother kisses and tucks him up In his pretty white bed each night Tramp, tramp, on the weary road-He is tired, and hungry, too, But to fall behind in the dusty march Is not what a man would do.

The little Boy Scout is home again;

To bed in the dark he goes, No more afraid of the bogev-hears That lure on the stairs, he knows. He has learned to conquer the pain of life, As only a brave heart can, And his mother steals to his cot to say: "Good-night, my dear little man. -New York American

FROM INDIA.

By One on Medical Duty in that Far Eastern Country. A Description of a Travel Through Iddia that was Not All Pleasure or Luxury.

BARAMULLA. NOVEMBER 25th, 1913. Dear Home Folk:

Yes, it is all over and here we are, and anchored tight to a muddy bank, with this yellow swirling river all about us; the mountains, great bare mounds, are on the other side and the city is on this. Tonight is "Duali" and we are going down through the bazaar to see the illuminations, for again it is the night to worship the Goddess of Money and here, as well as down in India, money holds supreme sway. It is not much of an illumination and only took us a short time to see it all. We will wait here for two days then start out.

This trip has been so delightful I do want to remember it all; but the servants-well, as I feel now, never again could I be induced to come into this country except, as I think I told you, in a flying machine, and so could look down on it all from a safe distance. Cold. you the rest next week. colder, coldest. These past few days are all just alike and tomorrow morning early we are off and I am glad, for my fingers are all swollen and stiffened up with rheumatism and my other joints driving around the city; again we visit- in operations than are assumed elseare also becoming suspicious.

CHAKOTI, DAK., Bungalow.-Our first day is over and here we sit, perched high along the side of this gorgeous mountain and the view from here is so delightful one would like to build just beside it and know you could come back, for our green mountains are now a mad splash of color and the yellows, greens, takes to get from one place to another; process. Each animal had to be secure reds and browns are wonderful, with a it is well it is the capital of India for no ly chained, and their squeals resounded great snow-capped peak to be the crown against the blue. The cold is not nearly so bad now and I am looking forward to night train and got into Jhansi at five little knife, while his assistants quickly tomorrow's drive.

Horrors! The tomorrow decided I was having too good a time and opened its flood gates at about four o'clock in ful confusion. I had hoped to write you docile may refuse to perform their tricks. the morning and poured torrents, yet on we had to go. Great wreaths of mist hung low along the mountains and then even think. Fortunately, today eased up those autumn tints were like a beautiful belt of Persian coloring below, and the the end I can't say even yet just what and tigers often have badly decayed river moving along deep down. But the date I will leave but will perhaps know teeth. It would seemingly require storm got worse and hail, lightning and thunder helped to make us wonder how we were going to get through the fiftyfive miles we had to go, and then our bedding, trunks, boxes and what not. must be protected. It was surely an experience and one I don't long to repeat. One horse went lame and fell and such beating and pushing and tugging, it re- boat in the city, eight annas out of the ally made me sick when that poor beast city, and one anna a day for food (regulying on the ground moaned in pain, and lated by law.) I went and helped to open the harness so it could get up and then, eleven miles short of our destination, we stopped. Another bungalow, and a most delightful one too; a big wood fire helped to cheer our spirits and a good dinner sent due to those who cannot possess their us to bed most hopeful.

Today the sun came out bright and cheery but the poor lame horse had to take us on to the next stopping place and I am afraid I did not appreciate all the beauty for I was counting the miles, and here we are at Kohala, and tomorrow we go back over the mountainsover my fairy drive of six weeks ago, and in the daylight I am afraid some of the glamor will come off. But it is ten o'clock and we leave at six, or earlier if we can, and so I am going to put out my candle (too poor to pay for lamps now) and go to bed. Good night, hope you haven't so many things to bite you as we will have tonight.

On the train-I had thought I could write to you but it jiggles more than I thought and vet tomorrow it must be mailed or another week will go past and you will have no letter.

We left Kohala before the last star had put out her lamp, and started walking up those great mountains. A band of mist lay like a great lake half way down the ravine; the mountains here have still their summer dress so are beautifully green, and then the blue sky above. The climb is a long, hard one and I was so sorry for the horses. I walked nineteen miles to the top and not one whit of the beauty came off; only my earth toilers were out preparing for the spring harvest, using such a funny little plow, while two men with pick-axes were grubbing ahead of the team, breaking the

earth deep down. We drove and drove and finally, near five in the afternoon, reached the top and only stopping long enough to eat some food we went on to as usual at daybreak, for our last twenty-five miles.

We stayed all day in the station waiting-room and cooked our food, and then went to a very nice hotel for tea, and drove about the city Raualpindi, and last night we came to Amaritsar, where we Golden Temple and it was so beautiful, I am indeed glad I did not miss it. Not a large building but of pure white marble with golden dome and great golden balls of rest. all around the upper part; the marble walls heavily and beautifully painted in all imaginable colors. It stands in a small lake and so is reflected on its surface like a mirror.

Many native Hindus were worshipping and they were bowing and crossing themselves. In the center-sacred hall-sat many priests and a native band of three stringed instruments were playing very weird but pretty music, while all about sat these queer Punjabi women, either counting their beads or kneeling, touching the floor with their heads. We just gotten out for his benefit; one must secure a written order from the authoritime to do in the few hours we had.

Amaritsar is another very wealthy and or carelessness. beautiful city and I saw more magnificence on the women in the short time I was there than I have seen in all India, bazaar made me envious; but I can't look and not wish. We go on to Umbal-to good health. As the animals repre-balls this afternoon, there change trains sent one of the chief assets of the circus, balla this afternoon, there change trains and get into Delhi tomorrow morning; have to wait there a whole day and will

get into Jhansi Saturday morning. I have had no mail forwarded for nearly three weeks and I am just hungering dens in city parks have had training in for what is awaiting me in Jhansi. Eight caring for animals in circus companies. Men who have been keepers in zoologicals days this getting home has taken and to less frequently enter into the service of be packed into a train as we now are- a circus company, where their experience like sardines in a box—makes traveling in the care of permanently located animals makes them valuable. Such a mighty unpleasant. If I don't get a change gives to each class of caretakers chance to write more tomorrow will tell a knowledge of what others are doing in

reach Jhansi. We spent the entire day less if not cured, greater risks are taken ed the fort and I renewed my acquaindrove out to the new Delhi and there in- summer. A bad sore developed, which deed they are making "the desert bloom." did not yield to treatment. After being It is a very modern, new city with simply beautiful new buildings, surrounded have to be grafted on to close the openby perfect lawns--nearly a city block in ing. No less than five young elephants size and the roads are almost perfect. were compelled to contribute an inch or My only fault with it was the time it sister. Securing this skin was a difficult other country could spare the time.

galow still in the hands of the color- the possibility of infection. washers and so my rooms are in dreada nice long letter but as usual work has Toothache is frequently the contributing The Scotch herring is content with 33 so heaped up I have been too busy to cause. During the winter season the a bit and I am trying to let you know Usually, a bad tooth is extracted. Lions next week.

box" (trunk) used in traveling. To be always securely fastened in place. explicit, the tin box is thirty inches long, sixteen inches wide and eleven inches high, and we paid the coolies one anna high, and we paid the coolies one anna comes sore and crack open. The former (two cents) to carry packages to the animals are accustomed to soaking in train, and four annas to move the house- soft, wet mud, and when kept in cages

(Continued next week.)

Wisdom of Quiet.

More than half a century of existence has taught me that most of the wrong and folly which darken earth is souls in quiet; that most of the good which saves mankind from destruction comes of life that is led in thoughtful stillness. Every day the world grows noisier; I, for one, will have no part in that increasing clamor and, were it tilation of the cages. only by my silence, I confer a boon on all.—From the Private Papers of Henry Ryecroft, by George Gissing.

Milionaire's Business Maxims. The late Philip D. Armour was a great believer in action. Often when his hog buyers were inclined to hold off for a few days for prices to come down, he would exclaim: "The time to buy these hogs is when these hogs are here." At the same time his attitude with his selling agents would be expressed in the following words: "The time to do business is when you see a margin of profit!"

High Tuberculosis Death Rate. The per cent. of deaths from consumption among cement workers is 19 per cent., as against 14 per cent. for all the male workers in the United States. They inhale great quantities of cement dust, but some authorities consider this a source of health because of the heavy admixture of lime. Authorities differ on this score, and even federal evidence is inconclusive.

Love and Measles. Love is like the measles, all the worse when it comes late in life.-Douglas Jerrold.

Circus in Winter.

The end of the circus year has come. From every part of the country long trains of tired, worn out animals and hu-Trete, and there spent the night, leaving man beings are finding their way into the haven of their winter quarters, there to spend five months in recuperation and preparation for the enthusiasm of the next year's season. A few circuses take no winter vacation, but spend the cold months in making an extended tour of some warmer country. The American circus has lately been introduced into the countries of Latin America, and sevhave spent the day. We went to see the eral companies will embark for the and the splints were removed in about a southern trip this month. One large com- month, and while the limb was a trifle pany will go to Australia. The maiority of the traveling circuses still depend upon having a long winter season

A Southern California town is the win-they spend the winter season, a consid-ter home of one of the largest companies erable number of them remain at headtraveling through the west. The merchants of that town so appreciate the additional business brought to them by the encampment of several hundred fine animals and the necessary attendants tive work themselves, sometimes come to

The circus of today is a highly organized business corporation and is managed after the strictest methods. The winter camp consists of only a small part of the company employed during the summer Whisky is absolutely taboo in most circuses. During the show season be deadly to the performer, for whom missed seeing the treasury as yesterday the difference of an inch may cause ina big man was there and all had been stant death to himself or some member of the company. In the winter quarters the rule regarding drinking is scaacely less rigidly enforced, because the care ties otherwise, and that we did not have and training of the animals in close confinement does not admit of irregularity

The most important work of the winter period consists of doctoring and treating the animals for any indisposition caused by the long, hard traveling of the and some of the materials I saw in the summer. At the close of a long season hardly any animal is found in thoroughly good condition, and only the best vethave everything I see so am learning to erinary science can restore the menagerie this becomes an important matter.

Keepers and their Charges.-A close co-operation exists between animal keepers throughout the world. Many men in charge of the established zoological garmeeting exigencies connected with wild animals held in captivity. The surgical operations performed call for much in-DELHI.—Again I missed the mail so genuity as well as the highest degree of you will get this all next week when I surgical skill. Since the animal is value-

One of the largest elephants in the tance with all its loveliness. We then circus grazed her shoulder during the geon went from one to another, slicing We came down by third class on a away a section of the skin with a wicked o'clock in the morning, to find our bun- applied an antiseptic dressing to prevent

Animals become cross and unruly at times, and those which are usually most animals have their teeth examined and those in need of attention are cared for. brave man to attempt to draw the teeth from a lion, yet it is frequently done You want to know the size of the "tin without any risk, for the animal is

Treatment for Disease.—The skins of certain animals, such as hippopotami, rhinoceroses and elephants frequently betheir skin becomes dry and hard. During the winter this is cured by copious applications of neatsfoot oil. The hippopotami object strenuously to the oil baths and have to be chained while they are being given, while the elephants apparently enjoy them and stand quietly enough, occasionally rubbing the keepers caressingly with their trunks.

Monkeys are subject to tuberculosis. When the disease is once fully established, it is necessary to get rid of the animal to avoid infection to others, but no small amount of preventive work is being conducted in the winter headquarters of

Large animals frequently contract rheumatism from being kept on concrete floors. On the other hand, elephants quite frequently develop bad sore feet from splinters taken from wooden floors. Often large splinters have been imbedded in the flesh for weeks or months, and the animal would be permanently lame, but for the good offices of the physician. The reatment of such injuries is painful in the extreme and the animals are heavily chained. The largest elephant of a circus, wintering in Rhode Island a few years ago, broke loose from the chains securing him while his feet were being treated. Crazed with pain, he charged through the side of the building and out into the open country. He had killed a keeper, injured several and frightened a large number of the people in the com-munity before he was finally recaptured. It was all due to an inch splinter, which had become imbedded and festered in one of his front feet.

Curing Injured Animals.—Sometimes an animal breaks a leg. Formerly such an accident would have resulted in his death. Now various devices for setting the bone are called into play. A valuable tiger broke his front leg beating a the bars of his cage in a rage with his keeper. The fury of the beast made the treatment difficult, but the bone was finally set. Several lassoes were thrown into the cage and around the beast's body. These were drawn taut. Another drew his head out of the way. The animal was hauled close to the bars of the cage, and the injured member was drawn

out through an opening and securely bound up in splints. A huge sponge soaked in chloroform deadened the animal's sensibilities. This operation was undertaken as an experiment. It was thought at first that the animal would have to be shot, but the veterinarian wanted to attempt a treatment. To his own surprise it was a success. The animal was kept in close restraint for three days and then his bonds were removed so that he had the freedom of the cage. He made few attempts to remove the splints from his leg and seemed much quieter in disposition than before. The bone healed

crooked, the success of the operation was most gratifying. While many of the performers in the circus have homes of their own in which quarters and spend the winter in developing new tricks or securing agility in the daily practice of their old ones. Old timers, who are no longer able to do acand trainers, that a carnival is being headquarters with some young perform-planned in honor of the company. ers to work out a new act. The old man originates it and secures a season contract. He pays the younger ones for performing it. The heads of the circus companies give audiences to new performers at winter headquarters, where they plan out the program for the next season. They are ever on the alert to it plays havoc with the nerves and may secure new talent to interest the public. -By Frederic J. Haskin..

The Sizes of Fish Families.

The spawning season of fish varies considerably. Actually there is no general spawning season. Some fish—the time, but, even in northern waters, the various periods form a complete circle of the year. The brook trout (September and October). Menominee whitefish. (November to June), and lobster (July and August), if we may include the latter among fishes for present purposes, alone would make such a circle. The Menominee whitefish has an extraordinarily long spawning season, it being two months in excess of that of the cod which runs from November to April. The Atlantic salmon (October and November), the pollock (October to December, and the lake herring (November) are other late spawners. The flat-fish, haddock, and shall all begin to spawn in February, the respective periods ending in April, May, and July. The sheephead and muskalonge prefer March. The seabass is a May spawner, and the mackerel and tautog have a season extending from

that month to July. There is quite as little agreement among fishes as to the number of eggs that ought to be laid in a well-regulated The cod boasts of being able to lay 9,100,000 eggs, but naturally does not do so except to make a maximum record. There are some other maximum figures that look pretty big on paper.

Among the most formidable are those

the sea-bass (2,200,000), the flat-fish (1,462,000), the tautog (1,142,600), the mackerel (546,000), the pollock (425,000,) the muskalonge (265,000), the haddock (250,000), and the shad (156,000). The lobster is below the 100,000 class, its figures being 97,640. The sturgeon has the tremendously "tall" average figure of

Not less striking are the contrasts between the periods required for the hatching of fresh eggs. While lobster eggs take from ten to eleven months to hatch, the sheeps head hatches in forty hours. In May and June from three to five days is a fairly common hatching period. The late spawners, as a rule, have a long period: the Atlantic salmon, 157 days, the brook trout, 50 to 125 days, and the lake herring 130 days. The Menominee white-fish, on the other hand, has a fif-

teen-day period. The water temperature varies also. degrees, but the Spanish mackerel wants 84.

It would be thought that women recognizing the delicacy of their sex, would seek in that delicacy, at first, for the cause of headache, dizziness and general weakness. But instead of this, they generally attribute such disorders, at first, to the liver, and treat the liver when they should be treating the delicate womanly organs. And yet women's mistakes are not so remarkable when it is considered that local physicians often make a similar mistake and treat for the wrong dis ease. Over half a million women have found health and healing in Dr. Pierce's
Favorite Prescription. Many of these
had tried doctors in vain. They were sufferers from female weakness in its extreme forms and considered their cases hopeless. Dr. Pierce's Favorite Precription will give relief in cases of irregularity, inflammation, ulceration, and ed lines here will be seen in the new embearing down pains, and the relief obtained is permanent.

Popularity of the Banana.

A tropical product for which a trethe circus to ward off the great "white mendous trade has been built up during plague." The most rigid attention is the past generation is the banana. When given to diet, temperature and the ven- we were boys, says a writer in the Country Gentleman, not every one knew how to eat bananas, or what they tasted like. Today the United States consumes more than five dozen per capita yearly, or about half a bunch for every man, woman and child.

Amazing Notice.

A traveling revivalist placed the following rather astounding notice on the bulletin board at a country schoolhouse on his arrival: "There will be preaching here the following Wednesday eve, Providence permitting, on the subject: 'He that believeth shall be saved and he that believeth not shall be damned' at 3:30 in the afternoon."

Discouraging. Her admirer swallowed hard, pulled at his collar, and finally made up his mind. "Lillian," he said desperately, "let's get married!" Lillian's bored expression vanished. "All right," she agreed; "but who can you marry?"-Judge.

Easy for Johnnie. "Johnnie," said the teacher of & metaphysical class, "can you give me a familiar example of the human body as it adapts itself to changed conditions?" "Yessum," said Johnnie, "my aunt gained 50 pounds in a year and her skin never cracked."

FOR AND ABOUT WOMEN

DAILY THOUGHT.

It is only necessary to grow to become indulgent. I see no fault committed that I have not nmitted myself.-Goethe.

A critic of the American girl says that her smile has been altogether too golden. He means that filled teeth are too often revealed by the American smile. While this is less to be regretted than unfilled teeth lost altogether, it is a calamity that would be averted by greater care, especially of the teeth that "show."

The late Richard Mansfield, when asked what he considered as a chief physical qualification for a girl who wished to enter the charmed circle behind the footlights, said: "Sound teeth without gold filling." In other words, the golden smile is not half so pretty as the simple pearly one.

One of the most prominent dentists in America who wants every one to know how not to need him, has issued a few 'Don'ts" that are worth consideration by every woman who cares for the beauty of her smile.

'Don't bite off thread," is one of his injunctions that may seem like going to extremes; yet even biting a thread may injure the enamel on the edge of the eeth, and start the insidious decay. Needless to say, biting any hard substance, such as nut shells, is sternly forbidden.

Moreover, the author of the "Don'ts" says do not hold pencils or penholders in the teeth. Pins or hairpins, being harsh metal, should not be held in the teeth. for the same reason.

Lastly, the warning dentist says: "Don't bite your nails." This is not on sturgeon, for example—prefer the spring account of the nails. Pride should dictate better fate for the nails. It is on account of the influence on the teeth, for not only the action of the nail surface. but the snapping together of the teeth as they come through the nail is sufficient to begin or aggravate the harm.

> It is fashion's decree that fussy blouses have had their day-for a time at least paratively light, consisting mostly of -and so we must give our attention to grain with some chaffed hay much simpler designs. They are ex-tremely smart and very becoming to most women.

This season we have a number of new blouse materials, most important among which are the pussy willow silks and a lovely new chiffon crepe, known as Georgette crepe.

Unlike chiffon, the Georgette crepe needs no net foundation, for, while it is quite thin, it is more opaque and washes beautifully. The pussy willow silks come in a

are a sort of cross between that and messaline, with a fine subdued luster to them. Either of the two fabrics just mentioned will work up nicely in a blouse in palest pink or yellow, mauve, navy, pea

smartest blouse colorings just now.

which any woman can possess. It is almost as bad in appearance as a scrawny throat, and is much more difficult to remedy. It is a far simpler thing to put on flesh to a woman's throat than to take it off, for if the tissues are fed with a good grease, such as cocoa butter, the

neck will soon begin to take on flesh. On the other hand, only exercise of the most vigorous sort will reduce the size of the throat. For a tendency to coat, labored breathing and quick-tiring double chin and to tighten the muscles being the least serious. Give each horse which have become loosened in a flabby neck try this simple but efficacious exercise. Throw the head back as far as it larly and uniformly. will go, drawing the muscles taut. Now turn the head slowly as far to the right as it will go, then as far to the left. Repeat to the number of ten times, increasing as you become accustomed to the one or two only.

Bathing the neck frequently with a

The important change in the suit for spring will be in the quantity of material used for a suit. The skirts will be flaring and short and the jackets will in general be short. There will be used many yokes on skirts and pleats and stitched bands that will be trimming in a simple line, inasmuch as the same ma

terial will be used The flaring line of the skirts mecessi tates the short jackets, and there will be many changes here. There will be box coats that are hip length and some shorter. There will be coats that dip in the front and jackets that have consider able fullness below the hips. Belted effects at the normal waist line and rais-

Serges, gabardines, poplins, coverts and novelty weaves will be used. Silks and a material known as chusdah will be used for suits for afternoon. In shades the neutral tones will be the favorite. There will be used the popular putty shades, sand color and a battleship gray and at the same time the old favorites, navy blue, dark Copenhagen, and black will be in good standing.

Separate coats for the spring will have a flaring line below the waist line. This will be in either the cut or the pleats at the side and the changes will be made in the collars and belts. The collars will be small, the belts raised, wooden buttons will be used and many modifications of the waist line will be evident. Patch pockets will be practical and especially smart for the sporty coat. The dippe line at the front will be new.

Meat Rolls. Take two cupfuls of seasoned cooked meat, seasoning with Worcester-shire sauce or any other, depending on the kind of meat. Moisten the meat with gravy and spread a small portion on large cabbage leaves, roll up parts where it is grown. and tie, place in a pan close together, cover with stock and cook until the cabbage is tender. Raw meat may be used, out longer cooking will be needed. Thicken the stock from gravy and pour around the rolls. Garnish with pickled chopped beets.

Crullers.-Mix one-half cup of butter and one cup of sugar until creamy, add one beaten egg, one cup of buttermilk and one level teaspoon of soda, sifted in two cups of flour. Flavor with mutmeg. Roll out thin, cut in shapes and fry in deep fat. Roll in powdered sugar while

-For high class Job Work come to the WATCHMAN Office.

warm.

FARM NOTES.

-There should be system in feeding pigs that are to be used for breeding, and that system should contemplate and have for its purpose rapid growth and early maturity of the animals; but at the same time they should be fed for a growth of frame and bone-not fattened on corn, but expanded by a feed rich in protein.

-Five hundred and twenty tons of water are required to produce one ton of dry oats, while 310 tons of water are needed for one ton of corn, and 453 tons of water for one ton of red clover. No wonder that a farmer gets worried during long-continued dry spells. The farmer or market gardener who instals irrigation to overcome possible droughts is, after all, sure of his crops and ample returns for the investment.

-Several new strains of winter and spring wheat on the experiment plots of the College of Agriculture of the University of Wisconsin have heads well filled with heavy berries, borne on straw that stands up well, promising large yields. Selected heads of ten of the most promising strains have been reserved for further breeding in accordance with the practice of the college, and selections will later be made of the best heads of new strains of spring wheat.

—The hog is a valuable aid to fertiliza-tion of land and pays a good return on the crops he consumes. He will devour large quantities of inferior fruit or waste grain and vegetables, which are not otherwise marketable. He will thus yield a profit on what might thus otherwise be wasted. The yearly increase in young pigs keeps the supply rapidly increasing from a small beginning. He is a lucrative investment. The secret of success in farming, as in other industries, lies in finding a use for everything. There is no reason why such products as are waste of the orchard should be thrown away. There is a use for everything on the farm, if the farmer will but seek until he finds it, and the hog is a great help in putting all sorts of feed to a profitable use.

-The morning meal should be comnot possess much bulk, and should be in condition to be easily and rapidly consumed, so as to be well out of the way when the animal is led from the barn.

In many stables the noon meal is omitted, but most horsemen hold that some grain should be given at noon. In any case the amount of feed given at midday should not be large.

For horses taxed to the limit of their

endurance all grain should be ground and fed upon moistened, chaffed hay. Food thus prepared is more rapidly masheavier quality than crepe de chine, and ticated, and consequently remains a longer time in the stomach. A little hay may be supplied the animal to be consumed at leisure after the stomach is well filled.

-Horses should receive their regular and largest supply of water previous to feeding, and it may be well to supply a limited quantity after feeding. Horses heated and fatigued may be given eight or ten quarts of water, even if cold, the green or rust color. These are the Too much flesh on the neck is perhaps balance of requirements being supplied one of the greatest obstacles to beauty after they are rested and cooled. On the road a few quarts may be given, no matter how much the horse is heated, but never give a large quantity at one time. On journeys give water every tew miles. Water the horse often, so that he will

drink only a small quantity at a time. Water first, then feed ground grain sprinkled upon a small allowance o moistened chaffed hay. Do not overfeed a definite allowance of hay, and never as much as he will consume. Feed regu-

Plenty of oats and good hay will supply energy and spirited action, but a horse is better nourished by several kinds of grain and forage plants than by

For horses which are out of the stable during the day and worked hard all piece of ice is excellent for keeping the grain, with the possible exception of flesh firm and for removing flabbiness. grain, with the possible exception of oats, should be ground. For those at extremely hard work all grains should be ground and mixed with chaffed hav. For horses not working oats or corn should not be ground, nor need the hay

or straw be chaffed. -It seems that chemists fail to find the stimulating principle in oats. On account of their palatability it is claimed that some oats should be included in every ration. New oats are unfit for horse feed, it is said by some authorities, as they have a tendency to soften the horses, causing them to sweat easily.

Next to oats, corn is the commones grain for horses. It should be ground for working horses. It is best suited for animals at plain, steady work. In protein and carbohydrates barley

lies between oats and corn, and has less oil than either. When the horses' teeth are good, and the work not hard, it may be fed whole. If ground it forms a pasty mass in the mouth Wheat mixed with corn, oats or bran

is superior to either alone for workhorses. Fed exclusively on wheat, horses are apt to go "off feed" and suffer other digestive derangements.

Whole wheat has no advantage over the same weight of bran and shorts in

the ration, but two parts ground wheat and one part bran make a good ration, fed with hay. The "bran mash," by scalding bran with hot water, is fed once or twice a week as a laxative in most countries. Lucerne is found to have a similar effect.

Straw forms a feeding stuff much inferior to hay, but is generally regarded as well worthy of conservation against times of drought, when the more valuable feeds are scarce and dear. Mixed with molasses, straw chaff forms an excellent horse feed, and during drought many farmers were enabled to keep their working horses in good condition in this way. Lucerne, both as pasturage and as hay and chaff, is extensively used in those

Clover hay has much the same value as Lucerne hay—both are highly nitro-

genous feeds, and are to be preferred as "roughage" when the grain used is rich in carbohydrates, but weak in protein, such as corn. Sorghum produces a coarse hay of high feeding value. The leaves of all varieties of sorghum form a bright, pala-

table, nutritious hay, free from dust and very useful for feeding horses especially.

Some silage may be fed to idle horses, but for working horses the amount must necessarily be limited because of its bulky, soft character. In time of drought silage—often the only feed readily and cheaply obtainable-may be used to form a portion of the ration, but it cannot be made the mainstay of horses, as can be done with cattle and sheep.