

GOOD HEALTH.

The Human Frame.

No. 6—The Larynx.

The larynx is one of the most delicate and beautiful organs of the body. It is, in fact, an admirably constructed musical instrument so placed as to utilize the currents of air, passing in and out of the lungs, for the production of sound. It is a piano, flute and clarinet all in one; and all compressed within the space of a cubical inch. The lungs are the bellows which supply the air; the trachea is the tube which concentrates and conducts it to the music box, while the "vocal chords" supply the place of the numerous wires which cause the different tones to be produced in the piano. But, while there are dozens and dozens of these wires required in the piano, this tiny, but unrivaled instrument has but two, and these, like the eyes and ears, are perfect duplicates. Yet, these two "chords" of yellow elastic tissue are capable of producing a far greater variety of sounds than the boasted Chickering with its seven or eight octaves. True, the human voice, except in rare cases, does not exceed two or two and a-half octaves, but the instrument of art only has a single half tone between each note, while the voice in this respect is almost unlimited—Jenny Lind, it is said, being capable of producing one hundred appreciable tones between any two major intervals in the scale. Besides this, when we consider the endless variety of expression the voice is capable of, compared with the puny "stops" of other instruments, it becomes needless to draw comparisons further.

But perhaps it may be desired to know something more of the mechanism by means of which these wonderful results are accomplished. Well, this box, placed just below the base of the tongue, and the forepart of which constitutes the well-known Adam's apple, is triangular in form, with the apex pointing outward, and is constructed out of nine "boards," or pieces of cartilage; these being bound together by eight muscles and about a dozen ligaments. Two of these cartilages have little horn-like terminations which project upwards into the cavity of this box, and at the ends of these are attached one extremity of each vocal chord, the other being attached on the opposite side. These cartilages are movable by means of muscles which cause them to partially rotate; thus putting the chords on the stretch or otherwise. These muscles are under the control of the will; and, just as the violin string gives a shriller sound when drawn tighter, so the owner has only to telegraph down, and these cartilages are "yanked" around in a twinkling, the vocal chords put upon extreme tension, and "Come out of that, John Henry!" is uttered with a shrillness that makes the little culprit fairly jump out of his boots.

These chords are, as we have said, composed of elastic, yellow fibrous tissue, and covered by an extremely delicate mucous membrane, the thickening of which, by colds or otherwise, causes that huskiness of voice so often observed.

Another curiosity connected with the voice, is a "sounding box," hollowed out of the frontal bones, known as the "frontal sinns," and which communicates with the fossa of the nose by means of tiny apertures. These often become also closed through the thickening of the mucous membrane from colds, etc., and hence occasion that peculiar, flat tone of voice known as "talking through the nose." When the cold passes away the aqueducts are reopened, resonance restored, and the nasal tone ceases.—*Rural Press.*

THE "OPEN TREATMENT" OF WOUNDS.—The principal maxims followed by Prof. Rose in the treatment of wounds are to secure absolute rest after arrest of bleeding, and to provide for perfect freedom of discharge and scrupulous cleanliness. Another principle is to interfere with the healing process of wounds only when special indications are afforded, and to consider stitches and bandages of all kinds as interferences to be so avoided. The air to which the wounds are freely exposed in the open treatment must, of course, be pure, and the system accordingly includes the use of energetic ventilation. In the hospital, ventilation is obtained only by constant opening of the doors and windows, a proceeding which, it is true, renders the heating arrangements often insufficient in winter. The advantages claimed for this method are: There is no pressure or constriction by dressings. An irritation of the wounds by changing the position and external applications is avoided. There is no danger of infecting the wounds by impure articles. The danger of retention of matter is small. The state of the wounds may be controlled at any time by simply lifting the coverlets. As healing by the first intention is given up, as many ligatures may be applied as are desirable, and thus secondary hemorrhage may be better avoided. The air of the wards is not infected by emanations from the dressings, as in the case of other methods, except Lister's. There is less need for materials for dressings, therefore less expense.

TRANSFUSION OF BLOOD.—In many cases, particularly those in which exhaustion had taken place from hemorrhage, transfusion has been attended with remarkable success. In cases where organic disease previously existed, failure have been frequent. Dr. Flint states that while normally a patient should have from fourteen to eighteen pounds of blood in the system to properly sustain the functions of the body, the injection of from four to seven ounces of blood into the circulation of a person apparently dying has been known to completely restore the patient to life. The introduction of portions of blood without the red blood-globules has been unattended with good results. These blood-corporcles are the oxygen carriers. It is Dr. Flint's opinion that this operation is perfectly practicable, and that it should not only be employed in those desperate cases where favorable results are scarcely expected, but should be resorted to before patients have fallen into such a desperate condition.

LEGISLATION AND HYGIENE.—The various lessons given us by Nature as to the possibility of checking or preventing disease have culminated in the fact that the State uses its moral power and material resources toward preserving the health of its citizens. As to how far the State may thus exercise authority, there is a difference of opinion; but the neglect of a city government to provide proper sewerage and the course of a common drunkard, both tending to disturb the public peace and the comfort of individuals, are alike crimes and should be considered as such in law. The existence of vile deposits which overwhelm the inhabitants with a tainted atmosphere, or the spread of the habit which strikes at the root of the physical, moral and intellectual health of the people, are both producers of disease to the community, which should be as sedulously guarded against as the visitation of a fever to the individual, and the means used to defend the people from their ravages are striking examples of pure preventative medicine.—*Sc. Am.*

Taking Cold.

The secret of avoiding the unpleasant consequences thought to spring wholly from the action of cold upon the body has very little dependence upon exposure, but a great deal upon an impure and weak condition of all the vital processes. In other words, with an average or superior constitution, and an intelligent observance of all the laws of health, men and women could not take cold if they wanted to; they might be exposed to the action of cold to a degree equal to the heat of the field, and with like impunity. But in the case of persons with feeble constitutions, and who disregard knowingly or otherwise—and most frequently otherwise—the conditions of healthy existence, no degree of care will prevent the taking of cold, as it is termed. They may live in houses regulated with all the precision of a hot-house—they may cover themselves with the most highly protective clothing the market provides, and yet they will take cold. The consumptive person does not live, nor ever will live, even if kept in a temperature absolutely uniform, and clothed in a wholly faultless manner, in whom the well known signs of one cold after another will not be apparent. But, on the other hand, there are those who, like the late Sir Henry Holland, of good constitutions and living in accordance with the laws of health, may travel as he did from the tropics to the arctic again and again, clad only in an ordinary dress coat, and yet scarcely know what it is to have a cold, or sickness of any kind. The truth is, that in order to avoid taking cold from ordinary, or even extraordinary exposure, the vital processes of the body must be made made strong enough to rise above the untoward influence of external conditions. If the body is not thus superior, if it is so weak that it can only act harmoniously under the most favorable conditions, a continued state of health is not among the possibilities. No more will a weak body maintain itself without harm amid great external disturbances than will the weak machinery of a steam vessel maintain itself without injury amid a severe storm. The avoidance of elemental disturbances are not possible in the one case any more than in the other, yet it is precisely what persons by the ten thousand are to-day seeking to accomplish in the preservation of their health. The study is not how to make their blood purer, their bodies stronger, but how to dodge the ugly weather.

The conclusion from all this is, that neglecting the conditions upon which strength of constitution and purity of blood depend, and then striving to avoid in a sedulously careful manner the evil influences of colds upon the body, is like neglecting the substance for the shadow of health; or more properly, it is like one who starves his body, and then strives to keep quiet in order that his strength shall not be exhausted. Let food be taken, and the exhaustion from exercise will not ensue; let all the conditions of health be observed, and then the natural changes of the weather will fall harmlessly on the healthy functions of the body.—*Sanitarian.*

HORTICULTURE.

How to Grow the Oleander.

The oleander is a very ornamental plant when properly grown, but we seldom see fine specimens. There is scarcely one of my readers who has not seen dozens of tall, straggly plants. I propose to give a few directions by which fine plants may be grown.

Take a healthy cutting, place it in a bottle of water, and let it remain there till roots appear; then pot it, shifting it into larger sized pots as its roots require more room. Do not try to have it branch until it blooms. It will then have a long, straight stalk—a good foundation for the plant you desire. After blooming, three shoots will start; allow these to grow, as these are the flower shoots, but after these have bloomed, cut back all the shoots to within four or five inches of the former branching place. Do this each time the plant blooms.

Two years ago we had a plant given us which was four years old and several feet high. In the autumn my husband remorselessly cut it down to within five inches of the first branching, but after starting the following spring it grew rapidly. The oleander has many good qualities. It will bloom well for its owner all summer, and then, after cutting down in the fall, may be put in a dry cellar for the winter, doing better during the following summer for its long rest. While growing it requires an abundance of water. It would be a good plan to allow it to stand in pans constantly full of water till after blooming, when water should be gradually withheld till cut in, and then it should be put in the cellar and no more water given it till the following spring. It is well to re-pot the plants every three years (just before starting them in the spring). If you do not wish them in larger pots, pare the ball of roots with a sharp knife on the sides and bottom, re-pot in strong, rich loam, and set in a shaded place, and in a few weeks the root will form anew.—*Kitty Clover in Floral Cabinet.*

Uses of the Cherry Tree.

At the Michigan Pomological meeting, Mr. H. S. Chubb paid a tribute to the cherry tree, which, in every position, contributes in some way to the comfort and service of man. "Even the gum which exudes from its wounds is precious for medicinal purposes and makes an excellent mucilage;" its fruit is handsome; is undoubtedly the best that is canned or preserved; for drying, it has "no equal in the whole realm of commerce," its curative properties are universally conceded, and its rich color is the acknowledged standard of beauty on the lips of the most charming of women. Nor is this all. Its timber ranks high; "the household furniture next best to black walnut and mahogany is made of Michigan cherry, and thence transported to all parts of the world; the best printer's furniture is manufactured from Michigan cherry, and distributed from thence wherever civilization has carried the printing press. Cherry, grown wild in the woods of Michigan, is sought for by the manufacturers of school furniture, as the best wood they can find for their purpose. It is easily worked; receives a good polish; has a delightful lively color, and, in contrast with maple and walnut, gives a pleasing variety to decorative cabinet and carpentry work, which of late years have introduced a new charm to dwelling, office, store, railroad car, steamboat, and private carriage. The wood is hard without being coarse or knotty, and its grain, though not prominent, is fine and beautiful." Thankful ought we to be, and proud, that we live in a land and enjoy a climate where this fruit and timber can be grown.

CHRYANTHEMUM will remain in bloom a great while longer if taken up and put in boxes just as the buds are opening than if left in the ground, no matter how favorable the weather may be out of doors. Moving does not injure them in the least if the work is done well; but the transplanting tends to retard the development of the buds, and keeps them in a partially dormant condition, but not enough so to prevent them from coming to perfection.—*Ohio Farmer.*

THE HORSE.

Principal Points to be Regarded in the Judgment of Horses.

It is well-known that men of large experience in the judgment and selection of horses are the first to discern faults of conformation and unsoundness, whether the infirmity is in an incipient state or more fully developed. One glance at the legs or feet is generally sufficient to detect malformation or infirmity, and any serious deficiency in this part determines the usefulness, and consequently the value, of the animal submitted for the examination of a competent judge. A good body will wear out two sets of poor limbs; and this point should always be kept in view in the selection of horses for any purpose whatever. A good head is a very material feature in all sorts of horses used for hunting, hack, or harness work. Coarse or heavy heads are seldom seen on really good horses; but big, lean and well-shaped heads are not objectionable, if they are not out of proportion to the strength of the neck and the size of the horse. Short, sharp and lively-looking ears; clear, but not very prominent eyes, with plenty of width between them across the forehead, are points of excellence. A small muzzle and good open nostrils, with plenty of width between the jaws, are elements of beauty always appreciated. A clean gullet—without a fleshy appearance or flabby-looking skin at the juncture of the head to the neck—must always be looked for when perfection of form is wished. An arched neck is not at all desirable, and a straight "cow" neck should be regarded as an objectionable feature. From the "poll" of the head to the withers there should be a slight incline, and the length of the neck should be determined at first sight as neither too long nor too short. It should, however, be clean and muscular, without lumber or heaviness on the crest, and the wind-pipe should be clearly defined from its juncture with the throat to the crest. Lengthy and obliquely-placed shoulders are essential in the formation of all horses used under saddle, or the rider will not be carried with safety or pleasure. With such shoulders as these, allied to long and muscular forearms, large, well-shaped knees, short and strong cannon bones, with the back sinews clearly defined; clean, well-formed fetlocks, and pasterns neither short, stilty, nor too slack, on sound, well-formed feet, a horse can hardly fail to ride pleasantly and firmly in his hand. A wide chest is objectionable, for the reason that it causes a rolling gait, and a narrow one will place the fore legs so nearly together that he is always in danger of "speeding out;" that is, striking the inside of one leg with the foot of the other. When standing in front of a horse, a good judge will take particular notice of the manner in which his feet are placed on the ground. If his toes are turned inward, he is termed "pigeon-toed," and is more objectionable than if he turned them out. Yet, in the search for that rarity—a perfect horse—both these faults will result in his rejection. A short back is always stronger than a long one, though not quite so easy to the rider. Nicely-arched and muscular loins, wide hips, and well-rounded quarters, with strong and muscular thighs, are also most desirable points. The hind legs should not be straightly formed, and the hock—being one of the most important joints in the frame of a horse—should be especially well formed, and free from every sign of bone or blood, spavin, curb, thorough-pin, or coarseness of any description. The hind legs should be placed far enough apart to prevent the interference of the hocks or fetlocks with each other, otherwise there will be that unsightly appearance known as "out hams;" but they should not be so wide asunder as to induce uneven or imperfectly-balanced action.—*London Farmer.*

LET THE HORSE ROLL.—Horses that are kept in the stable during summer, should be given daily the luxury of a roll on the earth. Rolling is the means given by nature for the animal to rid itself of vermin and skin diseases, and it tends to make the animal healthy. Some owners object to allowing a horse to roll on the bare earth, because it gets dirt into the hair and makes extra work to keep the animal clean, but the extra work pays, if rightly understood. We allow our horse to roll in the dirt when he is not moist with perspiration, and then stand an hour or two with his coat full of dust before being cleaned up.—*Ohio Farmer.*

CURE FOR BRITTLE FEET.—Wash the horse's feet clean when dry, apply with a brush, to the hoof only, a coating of this mixture: Fish oil, one part; vegetable tar, one part; oil of tar, one-eighth part.

POULTRY YARD.

Boiled Corn for Poultry.

In the breeding of poultry as in all other pursuits, a little care and forethought invariably return an apparently disproportionate result. In the rearing of poultry, where the expenditure on each fowl is small and the material provided comparatively inexpensive, we are apt to overlook the small wastes which occur in the transformation of the different grains into poultry, but which aggregate quite a respectable sum.

The opinion that corn is very nourishing food for fowls is so universal, that no further thought is given the matter. If any one should suggest that corn would be easier of digestion if soaked or boiled, he would very likely receive the answer that corn was nothing hard to digest for birds, which swallow stones and other hard substances without detriment. A moment's thought, however, will convince that the millstones and the grist are very different things, and feeding hard grain, although not exactly like feeding the millstones with pebbles, bears a certain likeness to it. The trouble attendant on the preparation of food, if it is to be cooked, may indeed seem very disproportionate to the advantage to be derived from such treatment, but, in reality, little time need be spent, as before going the rounds of the nests a little hot water may be poured over the grain, a tight cover put on the kettle, and the whole placed over the stove, where, by the time your rounds are completed, the corn will have become steamed and mellow, and have lost none of its good qualities. Remember each hen has a certain amount of animal force to be expended every day in some direction, and the less she has to give to digesting her food, the more she will have to be expended in egg-producing. The advantages of the warm food in winter, when much food goes toward producing animal heat to withstand the cold, are two-fold from the direct action of the warmth and the slower action of the food itself, to say nothing of the fact that the content produced by nourishing food will result in more eggs, for a hen thoroughly at home will lay many more eggs than a discontented one. We have performed the experiment ourselves and know that feeding boiled corn does pay, and it is as a result of experience that we offer this plan to our friends.—*Live Stock Journal.*

Why High Priced Eggs do not Hatch.

High priced eggs do not always hatch, for we have tried them and know. We set two dozen under orthodox hens of amiable disposition, that knew how to stick to the nest, and did it for twenty-three consecutive days. It wasn't the fault of the expressman, for they did not come by express. They were not old. We knew the yard where they were laid, and they were fresh eggs. There was a twelve pound rooster, with the hens that laid them. And the result of the hatching was one thoroughbred Buff Cochon chick. Now, there are 20 reasons why they did not hatch—beginning with this, that the hens were kept confined in two small yards. We do not know what physiological laws are violated that hens kept in close confinement do not breed well. Perhaps it is because they are fowls of the air, and need a good deal of that article and plenty of mother earth to make them thrifty. The fact is pretty well established in the experience of poultrymen. There is no trouble of this kind with hens running at large. They steal their nests in hay mows, under the barn, under the shed, in the woods, in out-of-the-way places with no protection at all, and nearly every egg hatches until frost comes. But with the fancy breeds, as they are called, come small yards, that several varieties may be kept upon the same place, and here trouble begins. All sorts of causes are alleged for the failure of the eggs to hatch. The expressman is roundly abused. The breeder is dishonest. He may be only ignorant, and over-anxious to sell eggs at six dollars a dozen. If small yards are not a good reason for infertile eggs, we will bring forward the other nineteen. The moral is: It is safer to buy high priced eggs after seeing the fowls.—*Ex.*

SALT IN POULTRY DIET.—Salt is necessary for human diet, and is found in small quantities in the bones of all animals. To pigeons, a species somewhat allied to hens, it is very beneficial. It is almost certain death to fowls if thrown out in large quantities, as when meat or fish barrels are emptied in their way. Salt fish or salt beef has been known to cause their death. But a little salt mixed with the chicken dough is beneficial; rather less should be given than persons generally use in their own food.

SHEEP AND WOOL.

Rules For Shearing.

We have been asked for directions as to how to shear sheep. However at home we may feel in the sheep barn, or on the shearing floor, we confess to being somewhat at sea when trying to impart information at so long range. Shearing a sheep is one of the things that need to be seen to be appreciated. There is no mystery about it; but it is, nevertheless, a trade that has to be learned by practice. The novice that has determined to become a good sheep shearer, should provide himself with, 1. A good pair of shears (avoiding cheap ones). 2. A splendid stock of patience. 3. A pair of overalls. 4. A smooth cutting whetstone. If we were required to add to the above, we would say, a little more patience; for it is the nervousness and impatience of the workman that, in nine cases out of ten, leads to the cramping and crowding of sheep, which begin struggling for relief, thus adding to the confusion and tediousness of the operation of shearing.

Even among accomplished workmen, there are different practices in the operation of shearing. Some commence work on the brisket, others on the neck, some at the top of the head, and still others lay bare the belly first—laying the sheep down by drawing its right foot across the neck and holding it with the left hand. Some shears use a bench or table, fourteen or eighteen inches high, upon which the sheep is placed, though a majority prefer to keep the animals on the floor during the operation. We recommend the latter, as it is equally as easily learned, is no more tiresome, and the table or bench is not always so easily improvised. The man who learns without it is always ready for work; the one who learns to use it is often at a disadvantage.—*Ex.*

SHEEP-RAISING IN VENTURA.—Sheep-raising is at present one of the most important interests of Ventura county, and it will doubtless remain as such until the development of the country closes out the various ranges, which will probably be many years yet. For several seasons past the business has been steadily increasing, proving lucrative to those engaged in it, and bringing large sums of money into this section. The present number of common sheep in the county is about 125,000, and we learn from Mr. Kennedy, one of the most extensive sheep-raisers of the county, that the average yield of wool for the season, including the fall clip, will be about three and a half pounds per head. Ordinarily this would not be regarded as a very heavy yield, but the wool this season is of a superior quality, and being very fine and clean, weighs less than the clip of last year. Of this spring's clip there have been shipped from this port up to date, 1,472 bales, averaging about 306 pounds, and about half that amount from Hanama, which includes nearly the entire clip. The amount shipped from this port, we are told, is almost equal to the entire shipments of wool from here last year. There are a number of excellent sheep-ranges in the county, but the Simi and Las Posas are the most extensive and important.—*Cor. San Jose Mercury.*

SHEEP DISEASE IN NEW MEXICO.—A correspondent in Santa Fe county, New Mexico, sends the Agricultural Department the following: I would like to call the attention of the department to a disease among lambs, reported to me by Mr. E. W. Eaton, one of my assistant correspondents. Mr. Eaton says: I would like to call your attention to a disease that destroyed about six hundred of my lambs, and in the same proportion, say two-thirds of all the lambs dropped in several other cases, and, if possible, get some information from the department of its cause and cure. It is in the mouth and on the lips, having the appearance of syphilitic warts in the mouth, and growing to entirely cover the teeth. So far, I could see it did not affect the tongue, the lips growing to three or four times their natural size. I used spirits of turpentine; this seemed to partially check the disease for a time, but did not entirely cure.

A CORRESPONDENT of the *American Farmer* proposes that Southern farmers devote a few acres to rutis bagas, for sheep food, arguing that, in order to raise early lambs, the ewes must have succulent food to produce milk. While his neighbors were losing lambs one winter through feeding dry corn and hay, he avoided this by giving plenty of cabbages, which he happened to have on hand.

CURE FOR SHEEP-KILLING DOGS.—The *Rural Sun* recommends suspending the dog from the top of a pen, so that his fore-feet will be about four inches from the floor, and then letting the oldest buck in the flock exercise his biting propensities on him. It is said to be an effectual cure.

THE APIARY.

Good Honey Localities.

Individual instances are not rare, of good yields of honey in almost every Southern State, but they are neither as numerous nor constant as in higher latitudes. We believe two principal causes can be assigned for this: The backward state of bee culture, and greater extremes of climate. Bees will not do well in too wet seasons, nor the opposite, and it is well known that the Southern States are much more liable to these extremes than the Northern States. Some of the extreme Western States are worse, perhaps, than the Southern in this respect, and there bees will not do well. The South has been lauded, frequently, as "the home of the honey bee," but we think the advantages of pasture are with some northern localities. Only in one thing does the South have the advantage, and that is in mild winters. The shortness of the winters may not be any particular advantage, as the prolonged season of work, very early and very late, does not afford very much substantial aid—the stocks consuming more than they gather. Quiet in winter quarters, as all bee-keepers know, is better than activity when it is useless.

The South abounds in flowers, but many of them do not yield honey. There is no nectar in the thousand and one swamp flowers of the South. Still, aside from these there are natural sources sufficient to make most of the Southern States good honey districts, if they are not subject to drought. These dry spells usually occur in the latter part of the summer and in the early fall, during which time no honey is gathered, and accumulated stores are eaten up. In such localities, if aliske is cultivated very extensively, and has the advantage of irrigation, which is easily secured in most localities, all the trouble is avoided, and the climate is one of the most desirable.

Another drawback to Southern bee-culture, and a serious one in my opinion, is the moth. Many will say "pshaw!" but that won't alter my opinion. The climate and long warm season of the South is favorable to the development of these pests to the highest degree. They breed in vast numbers and grow with astonishing rapidity, and destroy with unrelenting persistence. Of course, this can all be overcome, but bee-culture in the South is not far enough along yet to do this.

The greatest drawback to bee-culture in the South, however, is the want of enterprise, and the lack of interest in the subject. On this part of the subject we shall not enlarge at the present, leaving that for a future article. We close with the assertion that almost any locality in the United States can be made good for bees by the cultivation of those useful grasses and grains that produce honey largely.—*Bee-keepers' Magazine.*

REMEDIES FOR BEE STINGS.—Among the various cures recommended for bee stings, and to be applied to the part, are liquor potassae, olive oil, vitriol, laudanum, vinegar, honey, salaratus and water, salt and water, soft soap and salt, raw onion, tobacco juice, a paste of clay or flour, the expressed juice of any green leaf, or of the ripe berries of the coral honeysuckle. As animal poisons deoxygenize the blood, their antidotes will be anything that contain much oxygen. The poison of a bee being acid, an alkali must be employed to neutralize it. If, therefore, we were selecting for trial any of the above so-called remedies, we would choose either soft soap or ammonia. But if the individual stung is not very nervous, cold water applied to the wound will be quite sufficient, and it should not be rubbed. One great essential is, if heated, to get cooled just as soon as possible, and to avoid becoming heated again for at least two days. Nothing is so apt to make the poison active as heat, and nothing favors its activity less than cold. Let the body be kept cool and at rest, and the activity of the poison will be reduced to a minimum. Any active exertion, whereby the circulation is quickened, will increase both pain and swelling.—*Ex.*

INTRODUCING QUEENS.—Upon releasing a Milan queen to the bees, I was anxious to be sure that she be well received, so I removed a comb from the hive and let the queen go out on it among the bees, and was at once satisfied all was right. I introduced a second Milan queen in the same way, and others since. Being at a neighbor's apiary, when he was about releasing a queen, I suggested the same way, with like results. If one has a valuable queen I recommend this way of releasing, as should the bees pack on her they can be scraped off in a basin of water, when the workers will scatter and the queen be rescued. This plan of scraping a wad of bees into water was suggested to me by my neighbor. I think it first-rate, as there is great danger of losing the queen by trying to pull off the bees.—*Ex.*

The most complete check upon robbing bees is to place a bunch of grass or wet hay over the entrance to the hive. The bees will find their way to the entrance to their own hive, the robbers will be caught by the sentinels in passing through the grass, and soon cease their pilfering.

YOUNG bees come to maturity from two to four days sooner in California than in Pennsylvania.—*Harbison.*

ANOTHER CALCULATING MACHINE.—A useful contrivance is the "computing telegraph" introduced by J. E. Fuller, of Boston, who first produced it some 30 years ago, and who since that time has been continually improving it, so that at the present moment it is a most complete instrument. It consists of a square board made of old tarred rope, a material which is not given to expansion or warping; upon this is posted an engraved card, which has a graduated circle of the diameter of 8 1/2 in. Within this circle there is an inner circle, which revolves, and is graduated in the same manner as the outer circle. The divisions are from 0 to 10, completing the circle, and are the same for both; the divisions are similar to those of the ordinary slide rule, and decrease in a perfectly regular logarithmic order. In fact, the instrument is a circular slide rule. It possesses a great advantage over the ordinary straight slide rule, in consequence of its length (the actual length of the rule being 20.7 in.); this advantage is further increased by the circular arrangement being endless, only one scale of 0 to 10 is required, whilst in the ordinary rule, one wants 0 to 10 and 10 to 100. The instrument forms a slide rule of a very perfect character, and enables one to work out the simplest and most complicated arithmetical questions. In calculations where the same factor has to be used many times, the saving of time is enormous. For engineers of whatever kind, such a calculating machine must prove useful.

COMBINED SAIL AND DRAG FOR BOATS.—This invention consists in a novel construction of drag or drag-sheet, which not only has an improved hold upon the water to keep the boat's or other vessel's head to the sea, or act as a floating anchor to a life raft, as the case may be, but which is readily convertible into a sail when its use as a drag is unnecessary, and may otherwise be used to advantage in saving life and property.