

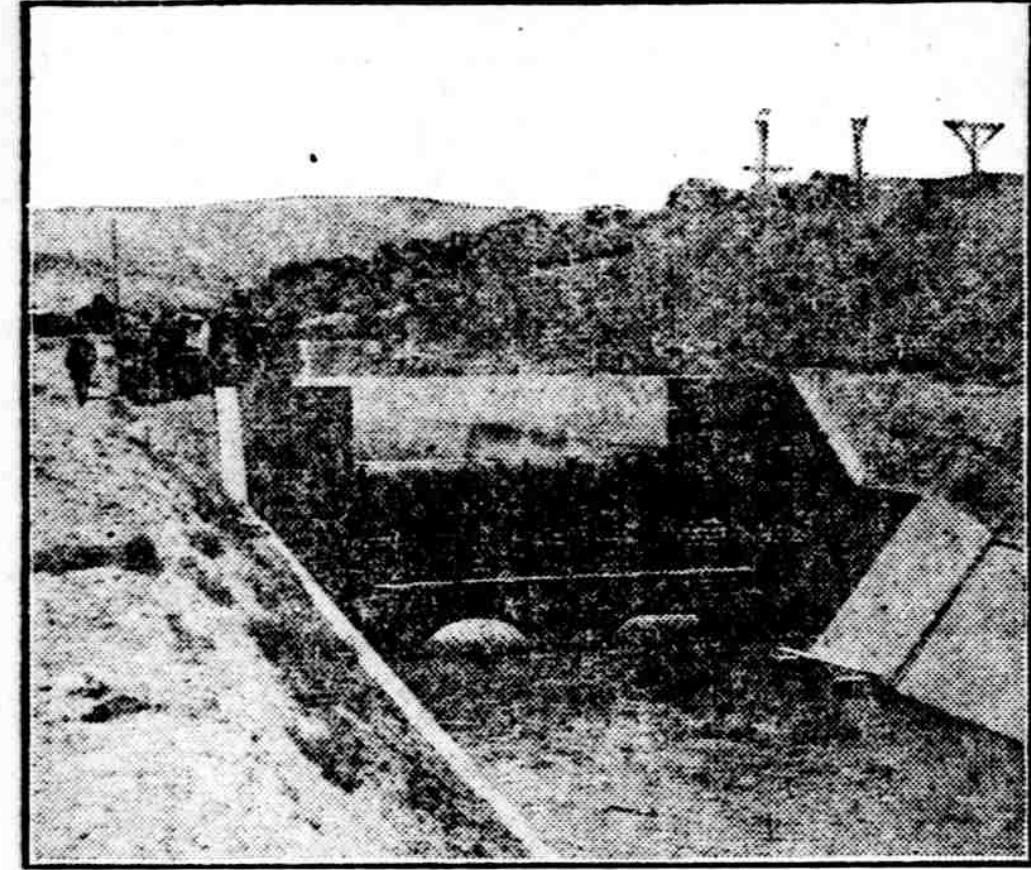
OPENS BIG TUNNEL

PRESIDENT TAFT SWINGS GATES OF GUNNISON RIVER BORE.

MIGHTY WORK IS FINISHED

Waters of Mountain Torrent Are Brought Six Miles Under a Granite Ridge to Revive Beautiful But Semi-Arid Uncompahgre Valley.

Montrose, Col., Sept. 23.—As many thousand people cheered themselves hoarse and cannon boomed this afternoon, President William H. Taft opened the gates of the Gunnison river tunnel and admitted to the Uncompahgre valley the waters of a mountain torrent brought from its rocky bed



Concrete Drop on the South Canal.

six miles underneath a great granite ridge. As the flood that henceforth will make incomparably fertile this lovely valley came pouring through the canal that conducts it to the Uncompahgre river, men and women fairly wept for joy, and the president himself was visibly affected. The opening of the gates was preceded by prayer and followed by national airs played by a band.

Mighty Project Completed.

This was fittingly signalled the completion of the Gunnison river tunnel, the first project undertaken by the United States government reclamation service. Work on the project was begun four and a half years ago and had progressed steadily ever since. Together with its main and distributing canals, the tunnel will irrigate 150,000 acres of land in a valley naturally one of the most fertile in Colorado, but which has been semi-arid because of the annual summer droughts and the inadequacy of the Uncompahgre river.

This day of the opening of the tunnel

up with an illuminated parade and pyrotechnic display.

Story of the Great Tunnel.

First of the big government reclamation projects to be undertaken, the Gunnison river tunnel has been one of the most difficult to carry through. The ample waters of the Gunnison flow through narrow valleys unsuited to agriculture or through deep, rocky canyons, while only a few miles to the west the lovely Uncompahgre valley has been suffering for water. The Gunnison, descending in ever deepening gorges, finally plunges into the Black canyon, one of the most magnificent mountain gorges in the world. This unpromising spot was selected as the starting point of the tunnel. Brave engineers lowered themselves into the Black canyon at points where the granite walls rise almost perpendicularly hundreds of feet, and after their surveys were completed active work was started on the immense project.

At great expense and under enormous

difficulties, a wagon road was built to the east portal of the tunnel. It is 15 miles long, and climbing the granite ridge between the canyon and the Uncompahgre valley, descends the rocky wall on shelf-work.

Bore Built for All Time.

Simultaneously work was begun at each end of the tunnel and at a point several thousand feet from the west end, where a shaft was sunk. As fast as the tunnel was driven through the shale and solid rock, it was timbered, and then the heavy timbers were covered with impervious cement. This gives a tunnel of solid concrete built to withstand the wear of ages. All the flumes, culverts, division gates, drops and other work along the lines of the main canals are built of steel and concrete.

There is no dam across the Black canyon at the point where the river is turned into the tunnel. Instead of this the tunnel itself taps the river from beneath its granite bed. By this plan neither floods nor slack wa-

ter can prevent the tunnel taking from the river all the water needed.

Has Immense Capacity.

A few statistics of this tremendous project are worth setting forth. The tunnel is 30,600 feet long, and 11 by 13 feet inside measurement. The main canal is 20 feet wide at the bottom and 33 feet wide at the top, and the average depth of the water is ten feet. The capacity is 1,300 cubic feet of water a second. After the tunnel leaves the west portal of the tunnel it is conducted through 12 miles of canal to the Uncompahgre. There is a drop of 214 feet in this distance, and this great fall will be utilized for creating power. A series of concrete drops has been constructed and the immense body of water rushing over them is capable of generating at least 10,000 horse power, which will be utilized in lighting the entire Uncompahgre valley by electricity.

Boer War Cost Many Horses.

Tremendous was the drain on the resources of the world caused by the war. In that war England sent 29,229 horses and 103,000 mules to South Africa, four times as many animals as the Germans took to France August, 1870. Tamerlane led 93,000 horses over the Hincoco Koosh in the conquest of Delhi.

wagon in daily use at Sethill, in Northumberland. Among other curious recent nesting places have been the breast pocket of a carconer on Ashbourne, a nail box in a village forge, the skeleton of a crow, and the rifle range butts at Ticehurst, Sussex.—Westminster Gazette.

The world's entire supply of the oil of bergamot comes from a small section of Calabria, fronting on the Straits of Messina.

NEBRASKA NEWS AND NOTES.

Items of Interest Taken From Here and There Over the State.

Stromsburg is about to put in a complete sewerage system.

A movement is on foot in Hebron for beautifying the town by a park and other improvements.

Wm. Ramsey of Johnson county was badly hurt in a runaway, started by bumble bees attacking his horses.

Tecumseh is in great need of more school room and some provision must be made to care for the increase.

Plowing and sowing wheat is now the order among farmers. The land is in fine condition for the work.

The citizens of Fairbury have taken a hand in the fight against a renewal of the franchise of the local electric light company.

At Crawford eight men went down twenty feet by a scaffolding giving way. One of the men will probably die from his injuries.

Mrs. Jones of Table Rock last week celebrated her nineteenth birthday, there being a large attendance of relatives and friends.

George Brewer of Gordon was arrested by Sheriff Rosseter and brought to Valentine and landed in jail on a charge of horse stealing.

A gattling section is to be organized at Beatrice. Adjutant General Harlin has assigned two gattling guns of the Nebraska National guard to that city.

The county commissioners of Jefferson county have just paid the bills incidental to holding Jefferson's primary election and in round numbers the expense was \$900.

J. B. Smith, a dairyman of Beatrice, took ten first, five second and four championship prizes on his herd of Jersey cattle at the Kansas state fair at Topeka.

Los Angeles (Cal.) dispatch: The body of James T. Cleary of Grand Island, Neb., who was drowned here recently, was recovered by the life saving crew.

The peach and grape crop in the section about Dorchester is plentiful. The farmers will have thousands of bushels of peaches for sale. The apple crop there is also large.

In the land drawing at Lake View, Ore., W. R. Stewart of Dorchester drew an eighty-acre tract and a town lot. The land lays about seventy-five or eighty miles from the town.

U. G. Chapman purchased the J. W. Roberts quarter section farm four miles south of Wynore for \$130 per acre. This is the top price paid for farm land in that section.

Richard H. Burrill of 2720 Normandie avenue, Los Angeles, Cal., aged about 27 years, died on the overland limited, west bound, just as the train was pulling into Sidney.

A large shipment of sheep from western ranges were quarantined in North Platte and are being held in the old stock yards. The inspector found them affected with mouth and hoof diseases.

Ray Martin, who was arrested in Belgrade a short time ago, charged with criminal assault on his 14-year-old niece, had his preliminary trial and was bound over to the district court.

The home of Gene Edwards of Hastings was burglarized and then set on fire at 3 o'clock in the morning. The family were not at home during the night. Every door in the house was open and everything had the appearance of being ransacked at the time of the arrival of the firemen.

Deputy Grand Master J. Robinson of the A. O. U. W. was at York for two weeks and with the assistance of members secured nearly fifty applications for membership in the local lodge. Arrangements will be made to take in a large class and at the time Grand Master A. M. Walling will be present.

Miss Ada Castor, a Lincoln soprano, who is well known throughout the state, has been married to Gregory Passover, a nephew of a dean of Heidelberg university. The marriage was secret and was discovered through accident while the newly married couple were spending a part of their honeymoon in Denver.

The fifth year of the Kearney Normal opened with about 300 students enrolled for the work of the coming year. The main building has been redecorated and thoroughly renovated and the dormitory has been carefully gone over and improvements in the way of paper and varnish applied, so that the quarters of the students will be most comfortable.

The county of Richardson has appealed to the supreme court from a judgment for \$18,500 obtained by drainage district No. 1, Richardson county. The judgment was given on the theory that public highways were subject to tax within the drainage district. The county alleges that the roads are not owned or controlled by the county, but by townships.

Relatives of Will C. Phillips, former district clerk of Lancaster county, who killed himself in Kansas City recently, have started a fight to see who shall be the executor of the estate. Mrs. Phillips had recently secured a divorce from her husband and she is an applicant for the position, holding that under the new law the divorce is not absolute for six months.

In York county there would have been thousands of bushels of peaches of the best varieties, but owing to the dry weather in August and the wet weather in September peaches did not ripen as they should and most of the crop is not marketable by reason of the peach breaking open, exposing the stone and rotting before getting ripe.

The state Christian Endeavor convention will be held in Fairbury October 29, 30 and 31. The local committee held a meeting and appointed subcommittees to arrange the program and entertainment for the delegates while in the city.

Sturgeon (Mo.) dispatch: L. M. Strong, aged about 27, of Kearney, Neb., was killed by a Wabash train about one mile west of Sturgeon. It is thought he fell from the train.

Statistics show that in the year just closed Cumby county shipped out 496,515 bushels of corn, 26,400 bushels of wheat, 339,900 bushels of oats, 4,000 bushels of barley, 63,823 hogs, 4,800 sheep, 220 horses and mules, 19,890 cattle, 10,655 pounds dressed poultry, 233,575 pounds live poultry, 9,010 pounds dressed meat, 53,450 dozen eggs, 52,760 pounds butter and 24,840 gallons cream.

NOTES FROM MEADOWBROOK FARM

By William Pitt



Keep the feed yards clean.

Pure water for the animals must be the rule.

A dull sythe is poor encouragement to rapid work.

Breeding from the best is the surest way of having the best.

Clean up the hen house and then keep it clean by regular attention.

When pastures are short give the sheep a small grain ration. It will pay you.

The time to harvest the onion crop is when the tops wither and turn yellow and fall over.

Sponging the back of the horse after removing the saddle and you will have no swellings or sore spots.

One pound of tobacco steeped in two gallons of vinegar is said to be a most excellent remedy for lice on cattle.

Scatter the fertilizer well away from the trunk of the trees, for it is there that the feed roots will be found.

A balky horse may offer good opportunity for the cultivation of patience, but that is about all. It won't pay to keep him.

The early frosts are the forestate of the weather which will soon be upon us. Take a look ahead and be sure that you are ready for winter.

Next the fair, then the fall plowing and sowing and finishing up upon the harvesting and then the winter time of reading, studying and planning for the next year's work.

What you put into your farm rather than what you take out determines how good a farmer you are. Ex-Gov. Hoard of Wisconsin put it about right in a recent speech when he said: "The way we look at farming is all wrong. Our philosophy is false. We do not see that we must build up rather than destroy if we hope to add to our fortune in the end. I must do two things on my farm and do them constantly: 1. Build up my soil; spend money, time and labor on it. 2. Build up the efficiency and productiveness of my herd by wise breeding, feeding and care."

Average milk of good quality should contain about 87 per cent. of water and 13 per cent. solids. Milk contains bacteria of many kinds and in varying numbers. They cause the ripening of cream and cheese and produce many other changes in the appearance and flavor. The number present in freshly drawn milk varies enormously with the conditions of milking, and, as they are greatly increased with dirty and careless handling, cleanliness in all matters pertaining to the milking and marketing of milk and keeping it in the home cannot be too strongly insisted on. Disease germs, notably those of typhoid, diphtheria, scarlet fever and tuberculosis, may also be carried in milk, so that the purity of the supply is of vital importance to every family and community.

Early and late blight on potatoes are common in most sections. Effective treatment is preventive rather than curative and must be begun early. If your fields have suffered this year either from early or late blight study the conditions carefully and then plan another season to spray thoroughly. The vines should be sprayed every two or three weeks, or oftener if rains have come and washed the coating of Bordeaux off. Late potato blight is often responsible for wet rot of tubers in the bin. Its progress on stored potatoes is checked by dusting them with air-slaked lime. The cost of spraying potatoes is about \$1 per acre and the gain from five to six sprayings amounts to an average of about \$25 per acre. When potatoes are thoroughly sprayed they not only produce much more of superior tubers but the tubers are less liable to rot and future infection of the potato soil is reduced.

The lousy hog will not fatten up. It is little use to clean up the hogs without cleaning up the sleeping quarters also. The manure and bedding material should be burned. If one dislikes to do this, it is all right to haul it out some distance from the hog pens and plow it under immediately. The pens must then be disinfected by scrubbing them with lime milk. Any other disinfectant would do, of course. As lime milk is cheap, the disinfecting should be repeated once or twice. The hogs must not have access to the pens in the meantime. If the hog-pen can be made fairly air-tight it may be fumigated with sulphur. If properly done, this will certainly kill the lice. The fumigating must be repeated in three or four days. Having cleaned the hog quarters, get busy on the hogs themselves. The most effective way to free them of lice is by dipping. Dip them of lice in a weak solution of 10 days to catch those missed or which have hatched out since the first dipping.

Good machinery is well worth taking care of.

A wrong date on an egg does not change its contents.

Dry shelters and beds for the hogs are essential to best results.

Now is the time to cull your stock and get the flock in shape for the winter run.

Don'ts as well as dos are a convenient and proper thing to have around the farm.

Never be so busy that you cannot be friendly and lend a helping hand to a neighbor in trouble.

Rotation of crops gets the fields out of the rut of deterioration and makes for enriched soil and greater crops.

Yes, it is too late to build and fill a silo. Let your disappointment at your lack spur you on to better deeds next season.

If the colt lets its tongue hang out of its mouth, you may be sure there is some reason for it. Find the cause and remove it.

A little spray on the cows the past summer would have given you many a pound more of milk in the pail. Spray is cheaper than milk.

After a day's work or a long drive over the roads sponge out the horses' mouths and noses with cold water. Also rub down the legs and body well.

Boil the small potatoes and feed occasionally to the chickens. That they enjoy them is only too evident from the manner in which they go after them.

It will not hurt the bees to be left in the ground until freezing weather comes. Then they should be pulled, packed in moist sand and placed in a cool cellar.

Watch the hired man when he is tending to the stock. If he is rough and brutal you can well dispense with his services, for the animals will not thrive under his care.

The National dairy show will be held at Milwaukee October 14 to 24. B. H. Rawl, chief of the national dairy division of the agricultural department of the government, will cooperate with Manager Van Norman of the Dairy association in making the show a success.

The bureau of animal industry, which has been conducting experiments for the past three years, has concluded that better butter can be made from cream pasteurized and not ripened, that is, churned sweet, than from the new process of pasteurizing and ripening with a pure culture starter. New butter made in this way, without the addition of a starter and unsalted, has too mild a flavor to please most dealers; but it undergoes fewer changes in storage than when made in the ordinary manner and may be sold, after being held in artificial cold storage, as high-grade butter.

The Ontario experiment station has been treating winter wheat in different ways to kill the stinking smut, and the results have been very satisfactory. Untreated seed produced an average of 3.6 per cent. of smut in the crop of last year and 9.3 per cent. of smut in the crop of this season. Seed wheat which was immersed for 20 minutes in a solution made by adding one pint of formaldehyde (formalin) to 42 gallons of water, produced an average yield of grain per acre of 50.4 bushels, and that which was untreated produced only 46 bushels per acre. The treatment here mentioned was easily performed, comparatively cheap, effectual in killing the smut spores, and instrumental in furnishing the largest average yield of wheat per acre of all the treatments used.

Look out for weevils in the grain. Thresh as soon as possible. Fresh grain should not be exposed to attack by being placed in bins or granaries with the already infested. Before storing, the old grain should be removed and the floors, walls and ceilings of the bins thoroughly cleaned. If the granary has been badly infested, it should be fumigated. Cleanliness is very important in preventing injury by these insects. Dust, dirt, rubbish, refuse grain, flour and meal serve as breeding places. Frequent agitation or handling of the grain will destroy many of these moths, because they are unable to free themselves from a mass of it and perish in the attempt. The simplest, most effective and inexpensive remedy for all insects infesting the farmers' grain stored in tight bins, is careful fumigation with carbon bisulphide. Use about one pound to 100 bushels of grain. Four the bisulphide into shallow receptacles and place them on top of the grain; then close the bin tightly for 36 hours. Do not breathe the vapor nor allow lights or fire near.

The balanced ration for cows is set forth by the New York experiment station as follows: The nutritive ratio, or, in other words, the protein supply for feeding milk cows, is a subject which is just now receiving a great deal of attention. There is undoubtedly a reaction against feeding standards, largely, I feel sure, because the place and function of these standards were so long a time misunderstood. Much is said about a balanced ration, as though it were a nutritive formula which is to be applied to all animals under all conditions. There is, however, no such thing as a balanced ration universally applicable. The needed protein supply for the 40-pound cow, capable of producing 14 pounds of butter per week, is entirely different from that of the average cow producing 200 pounds of butter per year. Equally true is it that 30 pounds of rich milk make a much larger demand upon the protein supply than 30 pounds of poor milk. A balanced ration, then, in the true sense, is one that is adapted to the work of a particular individual animal.

HARVEST-TIME IN FRANCE



An Interlude

FOR MILES and miles, as far as the eye can see, stretches the cornland; heavy golden wheat breaking upon a shimmer of oats, and oats fading to the whiteness of barley, with never a hedge or a fence between to limit the sense of distance. Here and there a clump of willows bends to the breeze; and here and there a mass of rock, scattered and seamed in all directions, rises above the crop. For the rest, all is a glorious blending of gold and silver burnished by radiant sunshine—a plain of plenty reaching to the southern horizon. On the north a line of dark forest sweeps in a semi-circle, with a little gray village sheltering within one end of its deep curve; and a mile away an avenue of plane trees, seen across the waving corn and bleaching stubble, shows where runs the straight high-road—the road that takes one to Paris.

The corn grows up to the walls of the village, only a sandy track dividing them. Here and there a cottage stands on the edge of the crop, embowered in vines that climb to the very chimneys. Over the sun-baked meadows are scattered little orchards of heavily-laden apple trees, and others crimson with plums; and everywhere—at the cottage doors, among the wheat, almost in the dust of the lane—rise the feathery fronds of asparagus. Poppies and cornflowers are mingled with the corn, and rosy-stained popwort and the dainty blue of chicory fringe the path. Here and there the vivid azure of borage gleams above the general tangle of color, varied with masses of pink-spurred blossoms, not unlike columbine, but even more delicately fashioned and tinted. The weather has set in fair and harvest is in full swing. In the great French plains machinery is still the exception rather than the rule, and the rhythmic swish of scythe and sickle mingles with the sighing of the wind among the corn stalks, and makes a gentle music fitting for an August afternoon.

We see a little plot of perhaps half an acre actually enclosed, that is to say, its limits are defined by a waving green belt of asparagus; and within it an old woman, in the spotless white cap which characterizes the peasant of northern France, is slowly gathering together the reaped oats with her curved hook and binding them in little sheaves. Her son cut her oats for her days ago, she says, but it has been too hot for her to work in the field. Only to-day the breeze has come, and by and by, when he has finished carting yorder, Pierre will help her again.

In the next field, if one can say "next" where everything seems to blend indefinitely, carting is in progress. Three big Normandy horses, wearing high wooden collars faced with brasswork, stand patiently under a half-empty wagon from which the men are pitching on to the stack; and the women and children are gleaning in the stubble. As the day wears on and they escape from their household duties more women flock to the fields, big, sturdy women, some of whom turn up their sleeves and bow to the reaping with the strength of men. Others join the gleaners. Here and there may be seen an entire family, the father hard at work loading or pitching, the mother and children gleaning.

The sun is sinking in a golden haze that rises like the dust from some

tremendous threshing floor, and the white road to Paris is barred with the shadows of the plane trees which Napoleon planted to shelter his marching troops. Motorists ought to bless the memory of Napoleon, for, once off the evil pave which surrounds the towns, there are no roads in the world so good as those he made all over France. Behind the avenue of planes are apple and pear trees laden with fruit, and, although within reach of all who pass by, apparently untouched. Either the little boys of France are of superhuman virtue or they get felled to reptiles before reaching the highway. Coming from the north, the sunny road runs abruptly into the forest and is compelled to curve among the rocky ridges. Glades branch off to right and left, losing themselves in the green twilight distance, and except for the murmuring of the leaves utter silence reigns. Here and there the beeches give way to thickets of acacia and hornbeam, and sometimes the tangle is broken by a group of pines rising from the needle-strewn soil.

There is an atmosphere of legendry about this ancient forest. It is not difficult to picture medieval knights or richly-caparisoned horses moving in glittering procession between the smooth trunks of the beeches, or a merlin chanting incantations and weaving spells among the crags above them.

It is a relief to turn under the acacia and plunge among fallen trunks and rank herbage towards a lighter spot, where open sky can be seen. A grass-grown mound reveals itself as the remains of a wall of rough-hewn stones, and beyond it lies a clearing bearing reassuring traces of humanity. A crop of green maize is waving luxuriantly in the breeze. Further on are fruit trees—almonds full of green nuts, standard peaches, apples, some with heavily-burdened boughs weighed down almost to earth, others clothed with fluttering gray moss; and only green with clumps of mistletoe; and under these old trees the grass is hidden in a shimmering cloud of harebells. Presently the joy of harvest will even penetrate the sadness of the forest. So when the sun has set, and twilight is fast creeping over the vast plain, the village appears once more. The straggling street is full of color—even after the glow of harvest fields. Old tiled roofs splashed with orange lichens rise against the darkened forest. Every step calls forth an exquisite picture. Rustic homes nestle among trees, walled gardens of dreamy seclusion, leafy lanes only leading to the deeper leafage of the forest. Nothing jarring, nothing new; only a little village of old France—a gem of exquisite simplicity set in the pure gold of the corn. At little tables in the inn courtyard people are dining or playing cards in the leisurely way that obtains in the country, while a horde of mongrel dogs, varying from an atom faintly suggestive of a griffon to a sedate monster obviously claiming relationship to a mastiff, wander casually in and out among the tables and solicit scraps with eloquent eyes or gently insistent paws.

Above the clatter of wooden soles and chatter of homeward-wending harvest-folk there arises a rumble of heavy wheels. Up the street comes a wagon piled high with sheaves, and drawn by two cream-colored oxen—muzzled and bowing low beneath a ponderous wooden yoke.

O. K. MOORE.

What Is Rest?

It is strange how people differ in their ideas as to what rest really means. According to accepted authority the definition of the word is: "A state of quiet or repose; a cessation from motion or labor; freedom from everything which wears or disturbs, etc., etc." but as is the case with nearly every subject that is worth discussing each individual mind places its own interpretation upon the definition. What means rest to some persons brings no refreshment to others, and it must be admitted, we suppose, that each person is the best judge of his needs. The most widely accepted theory of rest is to do absolutely nothing, to lie quietly in a relaxed position, to lounge about and give one's self up to complete repose, to do nothing that requires any effort of will or exertion of body. There are times when such absolute relaxation is necessary for the rehabilitation of nature, when mind and body worn and fagged out by a too constant application reach the limits of endurance and crave "some sweet oblivious antidote."

Roentgen Rays Wagons for Army.

Field Roentgen rays wagons are the latest addition to the medical equipment of the Austro-Hungarian army. Careful experiments carried on since last February have demonstrated the practicability and value of such wagons under all kinds of conditions. It has been found possible to get the apparatus at work in seven minutes. Any sort of electric current in the neighborhood can be employed, and, failing such, the dynamo mounted in the wagon and driven by a benzine motor can be used. Each wagon carries 12 gallons of benzine, sufficient for 24 hours' work. Besides the photographing apparatus the wagon carries 504 plates and films of various kinds, chemicals, a dark room which can be unpacked and put together in four minutes and all the necessary tools and other requisites. In no case less than 170 cases of the most varied character the field Roentgen equipment has worked with out a hitch. The photographs proved most exact and answered all scientific demands.

Robins' Curious Nesting Places.

The two robins which have built their nest in the cover of a meter at the Market Drayton Electric Light works have many precedents in the choice of unconventional nesting places. A year or two ago a robin's nest was built on a hook shelf in a night nursery at Chiselhurst which was occupied without interruption by a nurse and child. Four eggs were laid, and two young birds were hatched out. Two other robins built their nest on the axle of a colliery

Monopoly of Oil Supply.

The world's entire supply of the oil of bergamot comes from a small section of Calabria, fronting on the Straits of Messina.