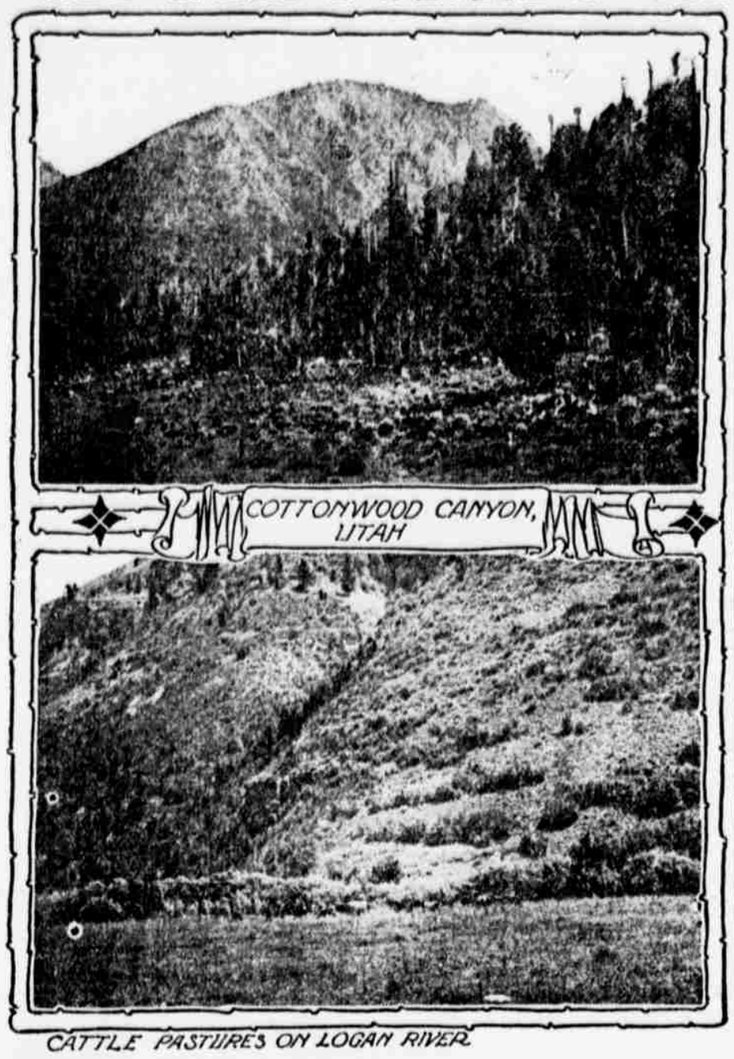
NATIONAL FORESTS AS PASTURES



COTTONWOOD CANYON, UTAH

CATTLE PASTURES ON LOGAN RIVER

REPORTS on the national forest business for the last year show that 4,449 cattle and horse permits, and 1,283 sheep permits were issued, allowing the grazing of 118,059 head of cattle, 6,799 horses and 905,446 sheep, in Utah.

Accepting the last year book issued by the department of agriculture as an authority, this means that nearly 29 per cent. of all the cattle, over five per cent. of all the horses and mules, and 29 per cent. of all the sheep owned in Utah on January 1, 1909, were provided with range upon the national forests of this state during the period mentioned.

In connection with these privileges, other special uses of government land were allowed where such privileges were esential to a proper control of the stock, such as the inclosure of limited areas of land for pastures, the building of cabins, drift and division fences, corrals, excavation of stock tanks, and construction of reservoirs. Twenty-six such permits were issued during the year covering 2,565 acres of land, and three and one-fourth miles of right of way. The total number in effect is 48, the area involved being 5,730 acres, and the rights of way 11 miles. Of these permits 35 were isued on the basis of a nominal rental for the use of the land, the remaining 13 without charge.

The use of the range in the Manti forest is more complete and intensive than in any other national forest in the United States, and it is typical of the Utah forests. Consequently, the experimental work has been largely confined to this forest. During the year a complete botanical survey was made, every plant being collected, classified and analyzed to determine its properties and its value. Areas containing poisonous plants were mapped and periods during which they could be used in safety were determined. Experimental areas were reseeded with native and introduced plants preliminary to beginning work on a large scale, and considerable valuable data secured. This work is of equal value to other sections of Utah, and its effect will eventually be far reaching.

As a side issue the forest officers killed eight bear, one mountain lion, 331 coyotes and 22 wildcats. This number, while not large, means a considerable reduction in the amount of stock destroyed by such animals, and helps compensate the stock owner for the fees paid by him.

At present seven associations of stock growers are co-operating with the forest service in its administration of the forests as it affects their interests, but there is room for many more. The forest service needs the experience and advice of the stockmen to enable it to secure the best results from the government's timber lands, and it encourages such organization. Recognition will be granted to any organization whose membership constitutes a majority of the users of a forest or district, and this recognition entitles the association to notice of proposed action and the right to be heard in reference to increases or decreases in the number of stock to be allowed the following season, divisions of the range between different classes of stock or its owners, or special rules to meet local conditions. The recommendations of an advisory board representing an association which has secured recognition, will be accepted and adopted in all cases where the rights of non-members or of other established interests will permit of such action, subject of course to the regulations prescribed by the secretary of agriculture. This means that a large degree of local administration follows the organization of an association, and as a matter of business the stockmen of this state should take advantage of the opportunity to the fullest extent.

The chief problem that the Utah stock grower has had to meet is that of providing summer range for his stock. Of winter range Utah has an abundance, the large deserts alone being enough to support the sheep of the state in a normal winter. In addition, Utah is thickly dotted with prosperous farming communities where the quantities of forage produced are oftener in excess of the demand than otherwise, and where in many cases the feeding of live stock affords the only means of disposal. This condition created a keen demand for spring and summer ranges, a demand complicated by the strong competition between the stockowner who winter grazed his stock at points remote from the summer range, and the owner who winter fed his stock upon the products of his ranch adjacent to the summer grazing lands. The result was not hard to forecast. Ranges became poorer and less productive each year, stock deteriorated in weight and quality, and losses were heavier. This was the condition that existed when the national forests were placed under the present system of grazing control. The forests occupying, as they do, the higher and more mountainous portions of the state, exert a considerable influence upon the summer range problem, for within their borders a considerable percentage of the summer range is located.

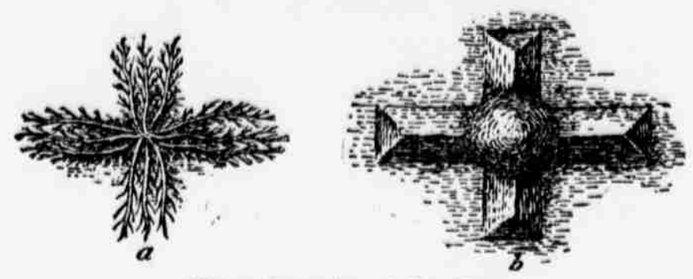
Few outside of the interested stock growers are aware of what has been accomplished by reasonable regulation and control within a very few years. The dwellers in certain towns, and the ranchers in certain communities know that the watersheds upon which they are dependent have been protected by the proper regulation of grazing. The stockmen know that the numbers of stock allowed have been reduced to the actual carrying capacity of the range but not below it; that the ranges have been equitably divided between the different classes of stock, and the owners; that the small rancher remote from market centers who must dispose of his crop and gain his livelihood by raising and feeding cattle is provided with a range adequate to his needs; while at the same time full consideration is given to prior use of the range by the stock growers who winter their stock on the deserts. Extensive investigations are being conducted for the purpose of improving ranges by artificial and natural reseeding; to discover means of eradicating poisonous plants, or to prevent loss of stock. Forest officers are assigned to the work of destroying predatory animals in localities where the loss of stock warrants such work. Range improvements are constructed wherever required to facilitate the handling of livestock or to protect forest interests. All of this work has tended toward a solution of Utah's chief grazing problem, and toward the advancement of the interests of every stock grower in the state.

One Gleam of Joy.

Johnny had two presents at the same time—one a diary, which he kept very carefully, and the other a pea shooting popgun, which he fired indiscriminately on all occasions. One day his mother found the following terse record in his diary: "Mondy cold and sloppy. Toosdy cold and sloppy. Wensdy cold and sloppy; shot grandma."—Youth's Companion.

PROTECTING FIG TREE DURING COLD WEATHER

Method of Bending Bush to Ground, Pinning Them Fast, and Then Piling Earth Over Them in Mound Form.



Winter Protection of Fig Trees.

A. Fig tree bent to ground ready for covering; B. Fig tree covered with earth.

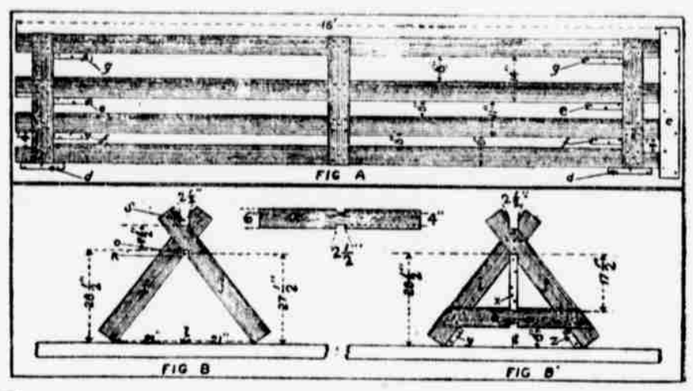
The fig tree has been widely though not extensively grown for many years in California and the southern states. Its greatest development is in the gulf coast region, where it was probably introduced in early times by the French and Spanish. There and along the South Atlantic coast it grows in the open without winter protection, bearing at an early age, and abundantly on soils adapted to its culture. In unusually severe winters the trees may be frozen to the ground; but if the root system has been well established, sprouts will spring up, grow rapidly, and bear in the following year. Under these conditions the tree appears as a large bush. Away from the coastal sections an annual crop is best assured by growing hardy varieties and giving some form of winter protection. The use of the bush or stool form from the start is advisable where there is frequent danger of winter-killing.

On either coast, or in the vicinity of salt water, it will need no winter protection. But in the colder portions of the state the method found successful in Maryland will do equally well. This is to branch the trees from the ground, and in the fall, after the frost has cut the leaves, bend down the branches to the ground and pin them fast, and then pile the earth over them, mounding it over the center and sloping to the outside so as to throw off the water, or gather the limbs like a cross on the ground and cover each bunch separately with a higher mound in the center like a four-pointed star. They will keep perfectly in cold climates in this way.

Farther south, where the tree is grown as a standard and the weather is only severe during occasional winters, some form of protection is advisable for the first three years. After this period the trunk of the fig is less easily injured by cold.

That the fig has not long since been developed as a commercial fruit, may be attributed chiefly to the inability, thus far, to produce a marketable dried fig, the fig of commerce in the humid southern climate. Moreover, the fresh fruit, which is highly esteemed both by those who grow it and those who have acquired a taste for it, is practically unknown in large commercial centers, being an extremely poor shipper.

PORTABLE FENCE IS HANDY



The convenience and necessity of having a quantity of portable fence on the farm is generally recognized, but really few farmers have as much as they need. Absence of a definite and practical plan often prevents the more general use of portable panel fencing. In circular No. 132 issued at the agricultural station, Urbana, Ill., Mr. William Dietrich has given a very complete description for building, easily and cheaply, the style of portable panels shown in the accompanying illustration. This was designed primarily to be used for swine, but may be used with great advantage for sheep and calves. The circular sets forth complete working plans and drawings for making these panels. To those interested it will be mailed free upon request.

GOOD PLOWING REQUIRES SKILL

Soil Conditions Must be Studied Before Right Kind or Depth Can be Employed with Success.

(By R. B. RUSHING.)

I was in conversation with a neighbor just a short time ago and he asked me the question: "What is good plowing, and how should it be done in the spring to give best results?"

I replied: "Good plowing consists in turning and setting the soil into nice, neat, even, clean, round, straight furrows so that the upper soil will be brought up as much as possible and exposed to the sun and atmosphere."

What do I mean by clean furrows? Having the weeds, stubble and grass all turned under and cutting a clean landslide. Even? Having the furrows all the same height.

Round? So that the furrows will show a little crease between them, and unless you plow straight your furrows will not be even.

Some may think that a certain depth and width are necessary in good plowing. It is. Regulate the width by depth, but there are so many different shaped mold boards which throw the soil in different positions, that some would cut wide furrows, and others narrow. Not only this, but some soils need shallow plowing in order to produce the best results, while others need deep plowing.

I plow a certain depth and width and get good results, but this might not apply to all farms. You might try the same width and depth with poor results.

I have found that even on the same farm there are sometimes different fields that will give better results with different depths of plowing, and, therefore, it becomes necessary to make it a study and know what is needed.

Charcoal for Fowls.

Charcoal in a granulated form should always be kept before fowls of all ages.

BEST METHODS IN POULTRY

American Farmer Has Much to Learn to Make Chicken Raising Profitable—European Ways Good.

(By M. K. BOYER.)

An English journal says that when they have a look at the average English farmer's egg basket and a continental egg box there is much to be seen and learned therefrom.

In the farmer's basket will be found eggs of all sizes, shapes, tints and colors. There has been no attempt at grading or uniformity. If a farmer gets an even lot of eggs, all brown, he can sell them at 14 for 23 cents (a shilling), but he would have to sell fifteen eggs of his jumbled-up lot for the same price. The continental eggs are all evenly and securely packed, all of one color, and graded according to size.

The condition of the English farmer's egg basket is very much like the egg basket of the American farmer. There is a reason for it. So long as the farmer will continue to harbor mongrel poultry he is sure to have all colors and sizes of eggs. Nothing but a well-selected and well-bred strain of a single breed will give the desired uniformity.

In England there are two or three methods employed by poulterers for killing their stock. One by neck stretching, by which the fowl is seized by the hocks, the finger and thumb of the free hand being placed on the poll and the neck is stretched until the spinal cord is ruptured. Death is instantaneous, as well as painless, and the blood flows down into the cavity of the neck.

The other method is to secure the fowl as above, stun it by means of a smart tap at the base of the skull, then open its beak and thrust a sharp knife down its throat and withdraw it rapidly by pressing the keen edge against the back of the throat.

The beak is then rinsed and the legs scrubbed with a stiff brush and soapy water, which makes them bright and clean for simple trussing for market.

PRICE OF PROGRESS

EXPLANATION OF CASUALTIES ON RAILROADS.

High Official Tells of Safeguards That Have Been Thrown Around Passengers and Employes —Can Do No More.

Many famous wars have been fought with less loss of life and fewer casualties than are recorded every year in the operation of American railroads. The soldier at the front, again, only faces death for a day or an hour at a time, while he enjoys long periods of safety. The railroad employe, on the other hand, and in a measure the passenger as well, faces a constant danger. The astonishing death rate of our railroads is frequently compared unfavorably with that of European countries, and has been explained by many conflicting theories.

A new light has been thrown on the situation by W. L. Park, general superintendent of the Union Pacific railroad, whose views naturally carry unusual weight.

"One human being is killed every hour and one injured every ten minutes," said Mr. Park in explaining the situation. "There is a steady grinding and crunching of human flesh and bone under the juggernaut of modern car wheels. It is the price we pay for progress, for our great industrial conquest of the country.

"Our railroads, nevertheless, constitute to-day the safest and most magnificent highway in the world. Nowhere are the great problems of safeguarding life and property being studied so intelligently and earnestly as in America.

"It is a common reproach that they do these things better abroad. But consider at what a rate we have been building railroads. In 1830 there were but 23 miles of railroads in America. In 1850 there were less than 10,000 miles. The next 50 years witnessed the most marvelous growth of its kind in all history, when 185,000 miles of railroad were laid. Then between 1880 and 1890 some 70,000 more miles were added.

"We have not yet slowed down enough to realize what is best for safety. A careful investigation of the subject shows that 85 per cent. of all accidents are due to negligence on the part of railroad employes, and the result of carelessness both by passengers and employes. Faulty equipment, therefore, plays a far less important part in this death and accident rate than is commonly supposed. Nevertheless, the railroads are attacking this problem with surprising energy."

The principal causes of accidents so far as the regular equipment is concerned were given by Mr. Park in the following order:

"To lessen the death rate," said Mr. Park, " it is important that we have light grades and that all curves should be avoided. Valley lines should be built above the high water mark. Embankments should be of liberal width, and all tracks should be properly ballasted. Bridges and openings in embankments should be of a permanent nature. The view of the tracks at stations should be kept open. If a station stands on a curve it should be on the outside. Buildings, such as pumphouses or water tanks, should be set well back. All fences should be permanent, preferably of concrete construction. There should be no grade crossings and no crossing of tracks at grade."

The number of safety devices in actual operation on our railroads will come as a surprise to the average layman.

"Our lives are safeguarded to-day by electrical devices which would have seemed magical to the railroad man of a generation since," Mr. Park continued. "There is the electrically locked switch, the interlocking of crossings and junctions, the alarm bell at railroad crossings, the automatic washout and landslide warnings, the telephone train dispatching, and many other automatic electric signals, all of which are being installed rapidly. The total mileage of automatic signals on all railroads in the United States on January 1, 1909, was 12,190."

Stockholders' Point of View.

Railroad people do not so much dread strikes as they dread the effect upon net earnings of granting merely such demands for higher pay as they privately believe to be reasonable. Their last experience with wage increases was practically awkward. Late in 1907 and early in 1908, when the higher schedules began to go into effect, gross earnings began to vanish, and between the increase of outgo and the diminished income, the results on income statements were heartbreaking.—New York Evening Post.

Enormous Freight Engine.

A huge freight engine, weighing 300 tons, built for the Southern Pacific railroad, is capable of hauling at ten miles an hour a train of 139 cars, weighing, with load, 72 tons each. The train, weighing 10,000 tons, would reach for over a mile.

HAVE TO MEET COMPETITION

Waterway Traffic Materially Cuts Down the Income of the Dutch Railroads.

The railroads of Holland seem to have a pretty hardscrabble time of it. Water competition—that of the canals and of the Rhine—has always been their bugbear. Even now, after 50 years of struggle for business, the railroads carry only ten per cent. of Dutch freight.

From Amsterdam alone there are not less than 150 lines of local steamers that go regularly to every port of the country, providing a daily service—or rather a nightly service—which enables them to deliver freight from almost anywhere to anywhere in the country every morning. It is only when the canals and rivers freeze up in exceptionally cold winters, says Moody's Magazine, or when in summer there is unusually low water that the railroads get for a short time any considerable part of this traffic.

Although the country is almost everywhere on a dead level, construction has been rather costly, on account of the great number of bridges required. For example, between Amsterdam and Rotterdam there are no less than 80 bridges, of which eight are swing bridges.

Sometimes the bridges required to cross the numerous and intersecting canals are practically viaducts of a mile or two in length, and long stretches of bridgework like that across Lake Pontchartrain at New Orleans or the approach to Galveston are not infrequent.

All the lines in the country are now operated by two companies, the Company for the Exploitation of the State Railways and the Dutch Iron Railway Company. The total length of all the lines is less than 1,600 miles, of which the state operates about 900 and the Iron Railway Company about 660, made up of 205 miles belonging to the state, 290 owned by other companies and 165 miles of its own lines.

There is considerable competition between the two companies, which, taken in connection with the sharp competition of the rivers and canals, insures a very good service. Each company pays a rental to the state for the lines belonging thereto which it operates, and each must share with the state in its profits over five per cent., which in face of the competition, the extremely low rates and the exceptional handicap under which the lines are worked is highly creditable to the management. In 1908 dividends were only three per cent.

Laugh on the Brakeman.

There is a brakeman on a Chicago & Northwestern morning train running south from Milwaukee who is fat. 'Corpulent, well padded with flesh," and similar temporizing terms do not explain his state of being—"fat" does.

Everyone was feeling rather grouchy the morning after the recent blizzard because the engine of their train had gone off with a snow plow, the train was delayed and the passengers were on the edge anyway because of bad service on the street car lines and snowbanks they had had to hop over on their way down, says the Milwaukee Wisconsin.

The "fat" brakeman came from the smoker into the next car and murmured to one of those passengers because of the reception he had in the smoker.

"They are all jumping on me, an' I ain't to blame that the train's delayed. Even Mr. C. (naming a well known pork packer who is a daily patron of the train) jumped on me fit to kill!"

A wit who sat nearby caused a laugh by remarking in a sepulchral tone: "You want to look out for him, he thinks you're a hog!"

Running on Time.

It is a common saying among railroad executives that they can make all sorts of rules about running trains, but that they have to put a man in the bushes beside the track to see that they are obeyed. Every railroad in America is striving after the—thus far—unattainable; to have all its passenger trains always on time. "Among every other 100 men who become firemen, only 17 are ever made engineers," quotes the author. "Out of every 100 engineers only six get passenger runs. The next time you see a white-haired man on the cab of a big passenger locomotive don't wonder at all at his white hair, but make up your mind that he has the goods or he wouldn't be there. It is a case of the selection and the survival of the fittest. It takes nerve to run the fast trains these days, and if any one of a dozen people, down to the man who spiked the rail, has made a mistake, you ride to certain death."

Era of Steel Cars.

The Union Pacific is another railroad corporation which has decided that all future orders for passenger equipment will be for steel cars. This policy should be universally adopted. It is also announced that within two years practically the entire line of the Union Pacific will have been double-tracked and equipped with the block system.—Springfield Republican.

Japanese Line Completed.

By the opening of the last section of the Kyushu railroad, the Grand Trunk line of Japan has been completed from Sapporo on the north to Kagoshima on the south, a distance of 1,300 miles. The first part of this line to be thrown open was the Tokio-Yokohama section, which began to carry passengers and goods in 1872.