

BOYS FROM THE PRAIRIES ARRIVE AT NEW YORK



The steamship Imperator docking at New York with happy troops from Nebraska, Kansas and Missouri. At left is Lieut. Col. Levi G. Brown of the Three Hundred and Thirty-fifth Infantry, from Nebraska; and at the right a little gray-haired mother who went all the way from Lincoln, Neb., to welcome her son.

HOW UNCLE SAM FED HIS SOLDIERS

One Meal, on One-Man Basis for War Period, Cost \$727,000,000.

9,000,000 POUNDS DAILY

Doughboys Ate 800,000,000 Pounds of Roast Beef, Smoked 425,000,000 Cigarettes and Ate 300,000,000 Pounds of Candy a Month.

Washington.—Soldiers who fought against Spain in 1898 lost in weight an average of 22 pounds each; the average American soldier at the end of the fighting in 1918 weighed 12 pounds more than he did when the selective service act or his own volition brought him into the army.

This success won by the army's subsistence branch in the great war is epitomized in chapters of the official war "material" history made public by the war department.

The food problem of an army of 3,700,000 Americans is visualized in the history by considering the force as a single man and the entire war period as one dinner hour. Articles comprised in the army ration assumed these tremendous totals:

Roast beef, 800,000,000 pounds; bacon, 150,000,000 pounds; flour (bread), 1,000,000,000 pounds; butter, 17,500,000; olomargarine, 11,000,000; baked beans, 150,000,000 pounds; potatoes, 487,000,000 pounds; onions, 40,000,000 pounds; corn, beans and peas, 150,000,000 cans; tomatoes, 190,000,000 cans; prunes, peaches and apples (for desert), 107,000,000 cans; sugar, 350,000,000 pounds; coffee, 75,000,000 pounds; evaporated milk, 200,000,000 cans.

The bill for this "meal" amounted to \$727,000,000 in December 1, 1918, the per capita cost having risen from 4 cents in 1897 to 48 in 1918.

At the time of the armistice, American soldiers in France were consuming 9,000,000 pounds of food daily. Moving this stupendous quantity over the 3,000-mile communication was the principal obstacle to be overcome. This and the necessity for conserving cargo space led directly in the later months to the shipment of dehydrated vegetables to the American expeditionary force.

"The problems were solved only by the assistance of the American food industry," the report says, and while instances were found of food specifications being violated, these are declared to have been very few and in most instances not intentional.

The emergency ration of the American soldier, designed to be used only in cases of extremity, was perfected during the war to consist of three entrees of beef, prepared with a bread compound of ground cooked wheat, each can weighing three ounces; three one-ounce cakes of chocolate, three-fourths ounce fine salt, and one dram black pepper.

A special ration was designed for

Victory Cathedral as World War Memorial

Seattle, Wash.—The part which Northwestern soldiers played in the world war will be commemorated here by the erection of a victory memorial cathedral to cost almost \$1,000,000. It is proposed that the 12 windows in the cathedral shall be in memory of the heroes of the allied nations which have made the supreme sacrifice. These nations include England, France, Belgium, Italy, Canada, Greece, Russia, Serbia, Portugal, Japan and China. Bronze tablets will contain the names of Northwestern men who entered their country's service, and battle flags will be hung from the Gothic rafters.

the use of invalid soldiers, including potted chicken, dried eggs, puddings, etc.

Importance attached to the supply of fresh coffee for the men is evidenced by the decision to ship the bean in the green form and have it roasted near the front. This led to the invention of portable roasters, capable of handling several tons a day. "Noting that tobacco has established its claim to a recognized place in the soldier's life," the report says probably 95 per cent of the American expeditionary force used the weed in one form or another. Monthly shipments averaged 20,000,000 cigars and 425,000,000 cigarettes.

The soldier's sweet tooth was satisfied by a monthly shipment of 300,000 pounds of candy during the early part of the war, but this was increased in November, 1918, to 1,373,000 pounds, and the following month the war department made candy a part of the regulation issue, one and one-half pounds being issued to each man every month. A close companion in popularity was chewing gum, more than 3,000,000 packages a month being consumed.

Economies Effected.

Interesting statistics are given of economies effected in changes in design. For instance, elimination of lacings and eyelets in trousers saved \$17,000,000, and the redesigning of the coat cut the cost of this garment \$5,000,000. Expert cutting reduced the consumption of cloth 23-100 of a yard, and saved 2,300,000 yards on the total order.

Innovations resulting from shortages in material included the substitution of American dyes for the German product and the use of vegetable "ivory" in button-making.

The activities of the quartermaster corps (afterward taken over largely by the bureau of purchase, storage and supply) included also the furnishing of hats, shoes, boots, fuel, oil, paint, tools, harness, and harness equipment, and even music. Prominent composers volunteered for the work of selecting a "balanced ration" of jazz and more restraining orchestras for the army bands.

To give the American aviator the surest fuel possible, the department took over every drop of "25.7 degree fighting naphtha" and confined its use to the service of planes actually on the front.

Voice Is Made As Loud As Cannon

No Trick at All to Magnify Sound Five Million Times.

WIRELESS EXPERT TELLS HOW

Ticking of Watch Can Be Amplified Until It Sounds Like Breakers on an Ocean Cliff—In Practical Use.

San Francisco.—A man's voice can be made as loud as the cannon's roar; it can be heard two or twenty miles. The ticking of a watch can be amplified until it sounds like breakers on an ocean cliff.

"It's no trick at all to magnify sound four or five million times, or indefinitely," said Tom Lambert, a wireless telephone engineer. "All that is needed is to connect a number of vacuum valves in multiple with a wireless receiving set, and the thing is done. At the first receiving contact one voice will be normal. Cut in one vacuum valve and it is raised seven times; thereafter it squares itself—seven times; thereafter it squares itself—seven times seven to forty-nine for the next vacuum valve, and forty-nine times forty-nine for the next, and so on."

"I mean volume of sound, not power of transmission," explained Lambert. "In a test recently a phonograph was connected with an amplifier at midnight, and we were lifting it up gradually to supply all San Francisco with song and amusement, when the police urged us to desist."

Grand Stand Hears Watch Tick. "In the stadium at Golden Gate park the ticking of a watch was made audible all over the grand stand while an athletic meet was in progress. Capt. Robert W. A. Brewer, an experimenter, moved off 2,000 feet and spoke quietly to his dog, and the dog could not hear him. A wireless station which he held, a telephone message from Euclid and through its amplifier started duck hunters in the marshes eight miles away."

Mr. Lambert exhibited one of the vacuum valves. Its exterior resembled an ordinary 16-candle electric light bulb. Through the glass, however, could be seen electric winding ever, could be dissimilar. Around a filament was wound convolutions of wire ment was wound convolutions of wire called a "grid." Above the grid was an encircling metallic plate. The current passed through each in the order described. The incoming wireless sig-

nals travel down the aerial wire to the tuning set and then to the vacuum valve, which is a "detector," or receiver.

For practical purposes the vacuum valve has its use, as in warships, where the wireless telephone speaks its message through a horn to several officers instead of to one using earpieces. It can be availed of to address audiences.

The wireless telephone is wonderfully extending the field developed by the wireless telegraph. Any wireless telegraph receiving set is equally good for receiving telephoned messages. The transmitting instruments, of course, are different.

Every airplane possessed by Uncle Sam and all United States warships are equipped with wireless telephone apparatus. These sets on warships are efficient at least 20 miles.

INVENTORS HELPED WIN WAR

Patents, Long Held Up, Are Now Being Allowed—Come From All Sections.

Washington.—The latest war secret to leak out is how friendly inventors all over the world gave to the United States their ideas for death dealing machines for the destruction of Germany.

A companion secret is how all these ideas were kept from the enemy by the "seven serious Sphinxes" of the patent office. This was a board of seven men, of unquestioned loyalty and sworn secrecy, empowered to examine and withhold patents on war machines until the war was over and meanwhile turn ideas of promise over to the government.

More than 2,000 devices which it was thought might be of value to the United States or the allies were passed upon and 200 were important enough to get before military authorities. Some of them, it is said, helped win the war. The ideas came from England, France, Switzerland, Hawaii, New Zealand, Australia, Mexico, Spain, Italy, Russia, Poland and one from Germany. Of course, a larger number came from within the United States. Now that the war is over the patents are being allowed.

Exit the Towel. Spokane, Wash.—Exit the roller towel; exit the paper towel; exit the individual towel—in fact, exit all towels. Step on a pedal and release a tropical hurricane on the hands and face. That's the way it's being done at Spokane's largest hotel. The drying machines are operated by electricity.

At Failure's Climax

By S. B. HACKLEY

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When Maxon Elliot stepped out on the platform to make his ringing commencement speech and Jessamine Farra felt the scrutiny of many pairs of eyes, friendly, curious, sympathetic, she held her head high. Who wouldn't be proud to be the sweetheart of "brilliant promise?"

He wasn't the valedictorian. That conceited, red-haired Walton Durrett was that, but Maxon's rank was high, and with his brown mop of curly hair, his goodly height and his clear, friendly eyes, was he not good to look at? That evening after young Elliot had gone out with Judge Farra's eldest daughter, his honor sat a long time in silent thought. For nearly three years Maxon Elliot had been Jessamine's humble worshipper, and Durrett, the self-confident valedictorian, had been her devoted admirer.

Durrett was one whom one would naturally expect to do things, and Elliot was a young man of brilliant promise. The judge's preference inclined to the latter, but he or any other would have to "make good" before he'd give his little girl to him.

The judge sighed thankfully. Jessamine would always listen to "Father." A little later when she shyly suggested that at the end of Max's first school year in Marion (he'd been given the principalship of Marion's academy), there would be a wedding, the judge shook his head.

A year is all too short, little girl. Let him prove himself.

Jessamine smiled certainly. "Two years if you think best, papa—but when Max is a university president, we'll laugh about our caution, won't we?"

The Marlon school board, at the end of the year, very quietly asked Professor Elliot to resign. It was not that he was not liked—his thoughtful consideration, his gentle courteous manner, made friends, but somehow he had failed as the school's principal.

That summer, through the recommendation of a relative, Elliot secured the editorship of the local paper in the large town of Hampden. For a year he wrote brilliant editorials, and struggled valiantly to build up the circulation of the paper, but at the end of the year the owner asked another man to take the editorship.

Then when Jessamine, with her sister and parents, sailed for three years of foreign travel, Max understood that he was free.

When the three years were at an end and he heard the Farras were coming home, he managed somehow to scrape together enough for a ticket to New York.

His was the first face that Jessamine recognized on the pier. For an instant her heart bounded and despite the old-world wisdom she had gained, she had to fight a foolish impulse to lay her head on the shabby decency of his serge coat and tell him, among other things, that failure in business didn't matter.

But Fulton Newhold, who for six months had followed in their wake, was looking on and presently Elliot was forced to step aside to make way for their other friends.

"Strange that Maxon Elliot should have happened to be in New York the very day that we landed," the judge remarked.

Jessamine said nothing. She knew it hadn't "just happened." Max had traveled those 800 miles just for a sight of her! Well, he'd had it, and she— The day after they reached her home Newhold, who was their guest, asked her to marry him.

Instead of saying, "Yes, please," as she had contemplated, and as she knew would delight her father and mother, she found herself saying very earnestly, "No, thank you."

It was four years before she saw Max again, and it was at the county fair.

"I've been out West," he told her, "sort of knocking about, but I'm doing some bookkeeping work for my cousin now, at the mills. His regular man had to stop awhile because of ill health."

He spoke cheerfully, but his mouth wore a subdued, conquered expression that was pathetic.

"Rob keeps me very busy, but I begged off today to run down here on the chance of seeing some of my old college friends," he remarked; but Jessamine looked into his wistful eyes and translated his words: "On the chance of seeing you, dear, on the chance of seeing you!"

Just then the red-haired valedictorian, now a successful lawyer and politician, stopped to speak to Jessamine.

"Pity about Elliot's being a disappointment," he remarked when Maxon had taken himself off. "All vision and no practicality. The wonder is he hasn't married and dragged some woman down, too! His kind generally do."

Jessamine's heart grew hot with unreasoning anger, but she laughed. "And you, Sir Knight?"

Durrett bowed low. "I'm waiting until I have a position to offer a woman."

"There's a gubernatorial election next year," she advanced tentatively.

He smiled in return. "And the hot-potlot will, who knows, Fair Lady?"

The next year Maxon Elliot at the fair told Jessamine he'd got the place as postmaster at Harper several months before. "So," he added, "maybe I can spare the money to run over and see Durrett inaugurate governor in December. His election's a sure thing. Will you be there?" he ended, a trifle wistfully.

"I—I've promised—I think so!" she answered.

Max understood her embarrassment, and the look of defeat that had temporarily raised itself settled back over his face.

In November, Durrett was elected governor of the state, Judge and Mrs. Farra prepared to give their daughter a very handsome wedding.

"Maxon Elliot to be tried by the United States court for fraud in the Harper postoffice!" These words confronted Jessamine one day when she picked up the paper.

"Too bad a perfectly innocent fellow gets himself in a place to be technically guilty of crime, and liable to the penitentiary," her cousin, Will Payne, remarked, looking over her shoulder at her startled cry. "I've heard about it. Seems a discharged clerk's twisted some papers some way, so the blame falls on the postmaster."

"Max Elliot's been adjudged guilty, and they're going to send him to prison, Jessy," Payne told her a few days later, "unless the President pardons him. Seems his friends are getting up a petition."

Jessamine fled to her room. "A lady wishes you to call to see her at once, sir," a messenger boy said to Maxon Elliot, two weeks afterward, when he was going to his room at his hotel, after a satisfactory interview with the nation's chief executive.

When he went to the address given a figure in a blue traveling suit ran across the room, and then Jessamine Farra was clinging to him, crying softly, "Oh, Max!—Max, dear!"

"Why, Jessy—Jessy!" Astonishment wrapped him. "What is the matter?" "Oh, Max, I want you!" she sobbed; "I want you!"

Maxon's heart, racing with the wild happiness of her weight against it, overcame him, and in spite of himself, for an instant, his arms went about her and held her tight; then he remembered.

"You are going to marry Governor Durrett, Jessy!"

"I'm not going to marry Walton Durrett—unless—unless you don't want me, Max!"

"But I—" poor Max stammered—"I'm a failure—I'm disgraced—I'd be in prison but for the president's kindness! Surely, Jessy, you don't understand?"

"I do!" she interrupted. "It's taken this to tell me where my heart's been all these years! If they'd sent you to prison, and you'd have let me, I would have married you on the prison steps! Kiss me, Max!"

Max kissed her, then held her away from him with a groan.

"Oh, love, I can't—I can't let you do it!"

But she was not listening. "Oh, Max," she smiled, "I'm so glad grandmother left me her home and so much of her money. It's invested safely—we can live on the income. You—you don't have to try to make money—you can study and write—and—make me happy! If you won't go with me and hunt up a minister I'll go home and marry the governor and live miserably ever after."

And Max went.

HOW MUCH RISK TO ASSUME

First Thing to Be Decided on When One Is Contemplating an Investment.

The first thing for investors to decide is the amount of risk they can afford to take with their funds, says World's Work. This will depend on the purpose which they had in mind when the funds were accumulated and on the conditions that will surround the investment. If one is laying up savings to take care of himself in his old age, is he not really a trustee of those savings for the old person he is to be? If he is saving for his family, is it not the same? But if the money is being accumulated with the view of taking advantage of a business opportunity, it is different. Or if one is in close touch with conditions in a certain business, he might be justified in taking risks in that field which would be improper for one ignorant of conditions to take. The degree of risk that one is justified in taking must be largely decided by the investor himself, although others of more experience or training might help. It is the first point that should be decided.

How Lloyd George Keeps Fit.

Few men have ever had to bear such a heavy burden as the prime minister has had to carry during the last three months. A general election, a peace conference and industrial trouble—each would have meant an epoch in the pre-war life of a premier. How does Lloyd George manage to keep so cheery and fit? An interesting light on this point is thrown by the fact that recently Mr. Lloyd George has several times strolled into a room occupied by his staff and asked if the girl secretaries had any amusing novel there. He has picked up some light literature and gone off to read it quietly for half an hour or so as a distraction from more serious affairs.—Edinburgh Scotsman.

Only Real Failure.

Because a fellow has failed once or twice, or a dozen times, you don't want to set him down as a failure till he's dead or loses his courage—and that's the same thing—George H. Lorimer.

GOOD CROPS FOR PRODUCING PORK

Industry in Irrigation Country Subject to Periods of Expansion and Depression.

LACK OF KNOWLEDGE NOTED

Department of Agriculture Has Been Making Observations in Its Western Projects on Utilization of Field Crops.

(Prepared by the United States Department of Agriculture.)

"Gum shoe" farming for ham and bacon production does not presuppose well-footed hogs. It merely means that irrigation as practiced by some western farmers involves conservative use of moisture for production of forage crops which may be harvested directly in the fields by the porkers. The swine industry in the rubber-boot country has been subject to periods of expansion and depression. One cause is lack of knowledge as to the possibility of using certain irrigated field crops, and as to the value of these crops when measured in terms of pork production. If full advantage is taken of the wide range of feeds available to swine growers on irrigated lands, pork production can be conducted more extensively, and with more assurance of success.

Irrigation farmers interested in pork production have had to rely on results obtained in nonirrigated sections, and applied to localities where well-footed crops grow. This lack of definite information was especially noteworthy in the case of field crops, which in other sections of the country are pastured by hogs or hogged off. Hence, since 1912 the department has been making observations in its western irrigation projects on the utilization of irrigated field crops as hog pasture. These investigations include pasture tests with 149 lots consisting of 3,795 hogs pastured on alfalfa, sweet clover, field peas, and milo.

Alfalfa Needs Supplementary Ration.

Pasturing alfalfa with hogs has been demonstrated a satisfactory method of utilizing the forage, and one of the cheapest ways to produce pork. However, to obtain satisfactory results, the alfalfa pasture must be supplemented with some carbonaceous feed, such as a 2 per cent ration of corn, barley, milo, wheat, or shorts. Under such conditions one good acre of good alfalfa pasture will produce, with reasonable surety, about 2,500 pounds of pork a season. Exceptional gains, as high as 4,292 pounds an acre, were reported in the case of one lot of hogs pastured on alfalfa, and given a 3 per cent supplementary ration of corn. Naturally the gains on alfalfa depend on the size and quantity and quality of the supplementary feed. It is poor policy to try to make pork on alfalfa pasturage alone without supplementary feed.

Hogs on alfalfa pasture, supplemented with about a 2 per cent ration of corn, barley, wheat, shorts, or milo, will consume from 250 to 350 pounds of grain for each hundredweight of gain. In general the grain requirement increases as the hogs get larger. The feeding values of corn, barley, short and milo as supplements to alfalfa pasturage are so nearly identical that choice among these side dishes should depend on prices, cultural adaptability and general economic condition. Where the grain is to be grown the swine raiser, preference usually is given to corn, barley, and the sorghums, depending upon the adaptability of these crops to local conditions. An acre of good alfalfa pasturage supplemented with a 2 per cent ration of grain will support 2,500 pounds hogs during the entire growing season. The carrying capacity of alfalfa pastures increases rapidly with grain allowance, and it varies somewhat during the growing season—the rate of crop growth.

According to specialists of the United States department of agriculture an acre of good alfalfa pasturage, if supplemented with a 2 per cent ration of corn, or barley, will support eight sows and 50 to 70 sucking pigs for about 60 days in early sun during which the pigs should gain 25 to 30 pounds apiece.

Sweet Clover Often Valuable

A few tests have been conducted to try out the value of sweet clover hog pasture, and the results proved that this crop cannot be rated as a rival of alfalfa. However, soils which are too wet or too for alfalfa, the irrigation farmer sweet clover a valuable forage. Rubber-boot farmers are coming prelate hogged-down corn and peas as a desirable combination pork production, in that it saves produces satisfactory gains in it and adds manure to the soil. Five tests of "hogging corn" in the bulletin show gains of from 1,048 pounds an acre of corn supplementary feed was used and from 885 to 1,877 pounds where the corn was supplemented other feed. It is estimated these tests an average of a pounds of corn was required to produce 100 pounds of gain when alfalfa was used, as compared with an average of 400 pounds of corn was not in combination alfalfa, late alfalfa pasture, or alfalfa pasture is preferable to corn to hogged-down corn on lands, because of its cheap abundance, and reliability.