

SILICA SLAG IS USED IN STEEL

United States Meets Possible Shortage

Substitute for Manganese Solves Problems Of War Preparation

Washington, D. C.—The substitution of silica slag for manganese in a new steel-making process, reported at a recent meeting of the Iron and Steel Institute in New York City, offers one answer to the problem of American deficiency in so-called "strategic war minerals."

"The United States," points out a bulletin from the Washington, D. C., headquarters of the National Geographic society, "is 'Uncle Croesus' in the possession of many raw-material essentials for peacetime industry as well as for war emergency. Such vital and abundant resources include iron, oil, copper, and coal."

"Lacking, however, are certain strategic metals which the nation now imports in relatively large quantities. Among these products are manganese, nickel, chromium, antimony, and tin—with, to a lesser extent, aluminum, mercury, and tungsten."

"As a vanguard of power among nations, the capacity for industrialization has outmoded the old factors of money, land, and population. With the rise of the age of power has come industrial chemistry, whose magic turns even the most common products of nature into products of trade, transport, and war. Modern industrial minerals, long ignored by treasure hunters, but now of incalculable value both as a source of economic wealth and national defense, have thus taken on glamor once accorded only to luxury metals and jewels."

"Manganese, for example, is extremely useful in the manufacture of steel. More than 90 per cent of the world's output is consumed by the steel industry. Hard without being brittle, resistant to shock and abrasives, manganese steel is a priceless boon to the high-speed era. Wherever the sound of machinery is heard, these steels are found in gears, chains, dies, railroad switches, locomotive tires, in crushing and pulverizing machines."

"The United States, as an industrialized country, is a heavy user of manganese; yet produces less than 8 per cent of its needs. One-third of the total amount of ferro-grade manganese used here is imported from soviet Russia. Brazil sells us about 25 per cent, and the rest comes from India, the gold coast, Canada, and other foreign sources."

"Nickel, another important commercial product, is almost entirely an import. Canada supplies the United States with nearly 90 per cent of this metal that has come to play such a vital part in the production of stainless steel for railway construction, in agricultural equipment, in the chemical trades, in radios, automobiles, airplanes, and ships. Used extensively during the World war as an alloy in armor plate, nickel finds peacetime occupation in such varied lines as the decorative arts and coinage systems. Around the world, more than four billion nickel pieces, issued by 23 countries, are estimated to be in circulation."

"The story of chromium has a similar plot. Uncle Sam accounts for about one per cent of his needs. More than half of the chrome ore used in this country is from Rhodesia, in Africa, with Cuba a runner-up to the extent of some 15 per cent."

"Also a modern-age metal, chromium is without known substitute for its manufacture of certain steels. With other alloys, it gives steel the necessary backbone to maintain a sharp cutting edge at high temperatures and high speed. Besides its business life, chromium also assists in military efficiency in the making of projectiles, armor plate, rifle fittings, and other inanimate objects that also have to 'take it' in war."

"There is antimony, from a sulphide ore, whose wide uses as an alloy in a machine-made world include the making of battery grids, chemicals and paints, cable sheathings, type metal—and small arms and shrapnel. The United States provides two per cent of its present requirements. The bulk of the imports is divided, with nearly 70 per cent from China, and with the rest of the market shared by Mexico, Germany, Bolivia, and others."

"Of tin, whose biography covers more than 5,000 years of service to the human race, Uncle Sam produces annually an almost negligible quantity, though consumption demands are high. Employed in containers for food and other materials, this metal is found wherever there is civilization—in ships, trains, motor cars, and airplanes, as well as in the equipment of telephone, telegraph, and water and electric systems."

"The United States, however, mines but 3/100 of one per cent of the tin which it needs. British Malaya and other foreign sources account for the rest."

"Various methods have been advocated to meet the national problems of deficient and strategic minerals in case of emergency."

"One general policy suggests, among other measures, that the government should purchase 'adequate' stockpiles of strategic minerals now imported, and that annual appropriations be made whereby the bureau of mines and the geological survey might extend their research facilities toward the permanent solution of existing shortages—either by the development of insufficiently-exploited 'home-grown' resources, by substitution, by new methods of use, or by a combination of all three."

"In emphasizing mineral deficiencies, however, it should not be forgotten that the United States leads the world in most essential resources. Except for soviet Russia, this nation is the only industrialized power of continental size, with a good proportion of its supplies in its own backyard."

"In the name of national defense, therefore, food, power, iron, munitions, chemicals, coal, copper, oil, and other natural resources could be mobilized into a formidable army of resources."

Sisters, July 21 (Special)—Sisters district of the Deschutes national forest is experiencing its most critical fire weather in recent years, as are all other districts on the coast. Last week the new weather indicator registered 5 which is very critical, as 7 is as far as the board will register. A similar board in the Crescent district did reach the 7 mark last week.

Fifty CCC were sent from Camp Sisters to the fire in the Sixkino mountains at Brookings, Calif., with Foreman Robert Wakefield, Roy Moore and Bob Hudson accompanying them. Bob Hudson is the lookout from Abbot butte and is being replaced by Paul Strieble during his absence.

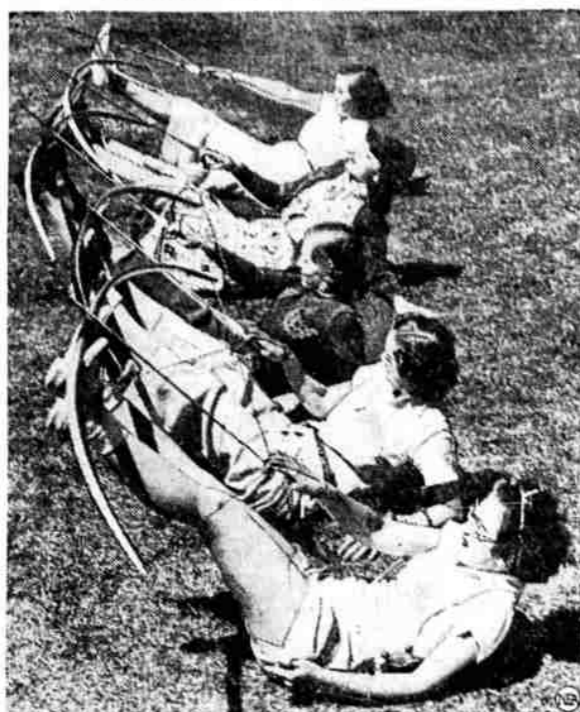
Sunday 14 CCC were sent from Camp Sisters to Jones well fire in the Crescent district. Keets Hunter and Ralph Barr accompanied this group as foreman and Bill Meyer followed with a truckload of bedding and food.

Orvil Koski is in charge of Camp Sisters and is smoke chaser there during the absence of the rest of the crew. Seven men were left at Camp Sisters and these are working on the state forester's residence in Sisters.

Sisters forest rangers received a call Sunday that the Gallots place on the Metolius was going up in flames, only to find that it was a false alarm. This is the second time this has happened. This spring a similar call was turned in regarding the Zehntbauer place.

Mrs. Dolly Holbert of Bend and her sister, Mrs. N. Scullie and two children of British Columbia, spent Sunday at the home of Mr. and Mrs. George Abelein.

Fair Archers On Sitdown



Beverly Crowell, Sally Lyon, Phyllis Roberts, Virginia Williams, and Leila Hodgson, front to back, perform the difficult seated flight shot in the Western Archers Association tournament at the University of California at Los Angeles archery field.

Miss Evelyn Zumwalt spent the first of the week here at the home of her parents, Mr. and Mrs. Frank Zumwalt, from Bend where she works at the Pine Tavern.

Mr. and Mrs. Roy Rickett and their son-in-law and daughter, Mr. and Mrs. W. C. Swartz and children, went to the valley over the weekend where they picked blackberries.

Mr. and Mrs. Frank Zumwalt went to Marion forks on the Santiam highway Sunday to visit Mr. and Mrs. Scott Young.

Miss Claire Templeton and her sister, Mrs. Prier Smith, and Mr. and Mrs. Harold Doty of Redmond visited Sunday with Mrs. Malde Connelly.

Mr. and Mrs. G. N. Moon and son who have been vacationing here since the Fourth from their home in Longview, Wash., have returned home. They stayed at Sorensen's cabins.

Joan Smith of Lakeview and Barbara Scott of Tumalo spent several days at the home of their cousin, Geosain Edgington, last week. Mr. and Mrs. Philip Smith came from Lakeview Sunday to get their daughter.

Mr. and Mrs. Paul Miller and sons, Douglas and Keith, are visiting here with their parents, Mr. and Mrs. Edgar Miller, from their home at the Cove on Crooked river.

Mr. and Mrs. Harold Allen and daughter Jo are spending a week here from their home at McMinnville where he works for the Shell Oil company. They are visiting his parents, Mr. and Mrs. H. K. Allen.

Mr. and Mrs. Laurence Huettl and children, Doris, Loretha and Leland of Bend, and Miss Lois Harrington of Plainview spent Sunday at the E. C. Zastera home.

Sisters baseball team played the Prineville nine at Prineville Sunday. Sisters was defeated 9-13.

Mr. and Mrs. Alex Jaenicke who have been vacationing at Hansen's resort visited at the home of Mr. and Mrs. Fisher Logan in Lower Bridge Sunday. The women are sisters.

Jimmy and Jack Wilson are spending a few days here with their brother-in-law and sister, Mr. and Mrs. Harvey Brandon, from their home at Starr, Idaho.

Mr. and Mrs. Byron Haines spent the weekend here with his brother-in-law and sister, Mr. and Mrs. Bill Durfee, from Eugene where Haines is taking a summer course at the university.

Mrs. Willis Patterson was honored at a bridal shower Wednesday at the home of Mrs. Anthony Roach. Mrs. Patterson, the former Mrs. Lorraine Hug, was married July 2. She was graduated from Sisters high school this spring. Those present for the occasion were Mrs. Bert Demaris, Mrs. Harvey Brandon, Mrs. Dorman Jackson, Mrs. Laurence Nixon, Mrs. C. N. Sorensen, Mrs. T. M. Waterbury, Mrs. Herman Spoo, Mrs. Ed Spoo, Mrs. Chester McKenzie, Mrs. Roy Rickett, Mrs. W. G. Swartz, Mrs. R. C. Colver, Mrs. A. E. Perry, Mrs. Richard Day, Mrs. Bob Turner, Mrs. Ernest Thompson, Mrs. Mabel Teal, Mrs. Frank Zumwalt, Mrs. Prentiss Van Tassel, Mrs. W. A. Thatcher, Mrs. L. A. Dennison, Mrs. Heinie Reed, Mrs. George Aitken, Mrs. Charles Leedy, Miss Rosemary Leedy, Miss Helen Sorensen, Miss Nell Roach, Miss Gladys Abelein, Miss Virginia Johnson, Mrs. Bert Van Tassel, Mrs. F. C. Zastera, Mrs. Maurice Hitchcock, Mrs. Warren Gridley, Mrs. Willis Spoo, Mrs. David Parker, Mrs. Earl Russell, Mrs. Arthur Templeton, Mrs. Myrtle Dennis, Mrs. Victor Roach, Mrs. Charles Sanderson, Mrs. J. B. Patterson, Annette Patterson, Marjorie Bush, Patricia Thompson, Barbara Parker, Beverly Spoo, Marie, Rose and Doris Swartz, Maxine and Ronald Teal, Betty Jane Sprague, Paul Nixon, Dale Brandon, Richard Hitchcock.

Mr. and Mrs. John Graven of Bend visited Mr. and Mrs. Donald Fields at their home here Sunday.

Mr. and Mrs. Adrian Wilkinson and Mr. and Mrs. Jerry Vauthiers spent Sunday with Mr. and Mrs. Cloe Coffelt at their home on the Metolius river.

Fred Hollenbeck, Jack Wilkinson and Marvin Sharp went to Lakeview Monday.

One More Vote for Joe Stalin

Comrade Joseph Stalin casts a vote for Comrade Joseph Stalin in Moscow during the midtown-elections to the Supreme Soviet. The election day was celebrated as a great festival throughout Russia—and Comrade Stalin did not lose.

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and Phyllis Jackson, besides the hostesses and the guest of honor.

Twenty girls arrived from Portland Sunday to spend two weeks at Camp Tamarack at Dark lake, which is operated by Misses Donna Gill and Lucille Murphy of Albany.

Many car loads of swimmers visited Scout lake Sunday. There were 29 cars there at one time during the day.

It is estimated that 1000 people visited Suttle lake Sunday and 18 boats were on Three Creek lake at one time during the day.

Ross Hammond and his son, Bill, and Bill's friend James Hickey returned to Portland Monday after spending ten days at the Hammond ranch near Sisters. Hammond is having a refrigeration plant installed at his new home here. The room is 5 by 8 feet and will be used to store meat and other supplies.

Christian Endeavor society is sponsoring a lawn party at the home of Mr. and Mrs. Laurence Nixon Friday night. Those who attend are supposed to dress as they think people will be dressing 50 years from now. Everyone is invited.

Mrs. A. R. Henslee and daughter, Yvonne, Mrs. Robert Ayers and son, Bobby, came last week from Marshfield and brought Mrs. Verta Walker who is now working in Bend. Mrs. Henslee is an aunt of Mrs. D. L. Farleigh Mrs. Farleigh's father, J. B. Henslee, accompanied by Harry Dayton, both of Riddle, visited at the Farleigh home Sunday.

HARVARD RESUMES ION LAYER STUDY

Seeks Facts of Region Far Over Earth

Cambridge, Mass. (UPI)—After a four-year shutdown, Harvard university's ionosphere observatory has resumed its radio investigations of the little-understood deep blankets of atomic particles which surround the earth's atmosphere a hundred or so miles from the ground, and which enable long-distance wireless communication.

The Harvard station now is making continuous automatic observations, 24 hours a day, of the heights of the ion layers vertically over Cambridge.

Within a few weeks this study will be supplemented by a program for continuous short wave radio transmission and reception between the Harvard laboratories and a station at Reusselau, Polytechnic Institute at Troy, N. Y.

The radio studies over this long base line will be carried out with automatic equipment set up within the laboratories and with a specially equipped radio truck which will be used to make field observations between the two fixed stations.

Scientists believe that continuous records of changes in the ionosphere will not only help to improve radio communication, but may also yield vital information about the sun, the nature of the upper atmosphere and about earthly weather.

Shifts occur constantly in the ion layers, and sometimes vary rapidly, throughout the day and night, and are caused chiefly by changes in the intensity of the sun's radiation.

Thieves Work Hard to Rob Grocery Store

Cincinnati, O. (UPI)—Thieves who robbed a Kroger grocery store here were ingenious.

The burglars succeeded in opening the top compartment of a safe in the store, only to find that the money was kept in the lower compartment. Unable to get that part of the safe open, they poured a bucket of water through a narrow hole in the top and as the currency floated toward it they fished it out with a hook.

The "fishing" netted the handits \$201.

• SERIAL STORY MYSTERY AT THE LAZY R

BY CLARKE NEWLON

CHAPTER I

Noisy, impatient Grand Central station lowered its voice and consciously paused to make a path for Nikki as she walked across the concourse between the two tall men. It was a tribute to his youth and levelness with golden lights, a figure that men wanted to paint or possess. At the gate she paused and spoke to her father:

"Goodbye dear, I'll wire you when we arrive. Steve will take good care of me." She smiled at the young man standing by in hand, kissed her father and patted him lightly on the shoulder. "Don't worry so much about your old diamonds. I wish you were coming with us."

Peter Jerome smiled back at his only daughter. "Have a good time and give my love to Uncle Jim and Aunt Amy," he said. "Have your bags gone on down?"

"The redcap took them on to the train," said Steve. "We'd better go." He grinned. "I'll keep Nikki away from wild horses and tame cowboys. Goodbye, sir."

Nikki's father followed the course of his daughter and the man she was engaged to marry down the ramp and then he turned away to take a cab. But as he turned his eye caught a figure going through the gate, and he halted, started.

He raised his arm in an involuntary gesture as though to call the man he had seen. Then he paused thoughtfully, wrote hurriedly in a notebook, tore out the sheet and gave it to a redcap with a dollar and careful directions. That done, Peter Jerome continued on his way, a worried line crossing his forehead.

In her stateroom Nikki removed the tiny jacket of her tailored bolero suit, untied the sash of a veil and laid aside her straw sailor. Then she turned to the bags the porter had placed in her stateroom before she arrived. Nikki thought about the trip ahead with a feeling of anticipation. She hadn't seen her aunt and uncle for five years, which seemed suddenly a long, long time, because previously she had spent at least eight of every summer on the Lazy R Ranch and Aunt Amy had really taken the place of a mother in her affections since her own mother had died.

Nikki supposed that Uncle Jim was having fun that he had turned the Lazy R into a dude ranch. She remembered him writing that "you easterners will always pay a good price to be entertained, but I can't tell anymore what I'll get for a carload of steers at Chicago." He had been very successful, Nikki knew.

Five years away and during those five years she had finished school, made her debut, spent a year in Europe and become engaged to Steve Mallory, the young attorney who was this moment arranging his own luggage in another stateroom. He would join her in a few moments for Stephens Mallory was impatient of things which kept Nikki away from him, as he was impatient with details and monotony and dullness. She had known Steve less than a year but he had a way of brushing aside opposition.

Nikki glanced at her own profile in the mirror, a slightly imperious pride if she had recognized it as such, and pressed the release snap on her dressing case.

She raised the lid and stood staring with sharply drawn breath. She touched the case with one finger. It was an unconscious movement.

For in the case, instead of her own neat array of toilet articles, Nikki saw a bundle upon a bundle of green and gold currency heaped in fascinating disorder.

There were packets of ten dollar bills, twenties and fifties, precisely bound and each labeled "\$1000". They had evidently been packed in stacks of denominations, but in movement the bundles had been mixed and confused.

The first thought Nikki had was that the interior of the case looked like a bank teller's cage after an earthquake. Letting her breath out slowly she touched the money gingerly as though expecting to see it fade away and be replaced by the familiar golden tops of the jats in her toilet case. But the money remained.

There must be at least a hundred of the bundles, Nikki thought. Whose money was it and why was it in her bag? Nikki thought back. The maid had packed for her. Well, the maid certainly hadn't put \$100,000 in her bag. Nor had anyone else. It was impossible. But there it was, impossible or not.

A dozen thoughts started through her head. She should call the conductor. No, better call Steve. Maybe the money was stolen. Maybe it was counterfeit. They might be involved in some long investigation and have to return to New York. They might even be suspected of something, heaven knows what.

Then Nikki saw a brown morose face among the piles of green and yellow, and she lifted out a man's wallet that apparently had been tossed into the case with the money. It was an ordinary enough wallet. Nikki had seen others like it in the hands of escorts who had leaped out bills to settle countless checks for countless dinners and lunches.

She opened the billfold and across the inside flap read in plain gold lettering: "Charles Dillon."

Nikki repeated the name to herself and she held the wallet a moment and then dropped it back into the bag. As she did there was a movement at the door. The lock clicked. Nikki turned half in panic, her right hand making an involuntary gesture to close the bag.

"That's right," said the man standing in the open door. "Close it back up. And then just forget that you ever saw it." His eyes were on the case.

The voice wasn't unpleasant. It was low and rather smooth, the voice of a man very sure of himself and very sure of the situation. Nor was the man unpleasant. His medium height fitted compactly into a dark suit. His age was indeterminate—maybe 35, maybe 40. A little too well barbered, thought Nikki.

She let the lid of the dressing case drop and glanced back at the owner of the voice. He wasn't looking at the bag now. He was looking at her. He saw the blond hair and the wide gray eyes that were even wider now as they stared at him. He saw the smooth column of her throat, the firm chin and the lower lip whose fullness was a perfect foil for the curving line of the upper. He saw the slimly curving figure with its deceptive suggestion of fragile delicacy.

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Then he spoke again, but his eyes hadn't ceased their covetous admiration. His voice was still smooth, low.

The voice and the eyes don't fit, thought Nikki. The eyes are his. The voice he has stolen from someone else. It doesn't belong. She fought off a feeling that she was standing half-dressed. She heard him saying: "I am very sorry. The bags were together and the porter made a mistake. Not a very serious mistake, although I really haven't much use for the things in this." He held out a dressing case and Nikki saw then that the bag in his hand and the one which held the money were identical.

He stepped over to her and set the bag in his hand down, fastening the rows which held the pocket of bills. "I think you will find all of your things in good order." His eyes were still upon her as he bowed slightly at the door and was gone.

It was only seconds after he left that a knock sounded on her stateroom. Nikki hadn't moved.

The second rap was followed by "Redcap" and Nikki opened the door to take a note from the colored boy. She felt the train jerk and slowly glide into motion as it left the station. The note was from her father and read:

"Be on your guard but under no circumstances antagonize Charles Dillon who is on the same train. This is extremely confidential. Will explain later."

(To Be Continued)

SIGN WARNING EVALUATED Oakland, Cal. (UPI) Mrs. Louise Rothwell saw a new sign posted in Lake Orland park but could not quite make out the wording. So she walked over to get a closer view. It read "Beware, Poison Oak." But it was too late. However, she had one resource and that was to sue the city which she did for \$1,000. The court awarded her \$100 for medical services.

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