

# ENGINEERS TO SURVEY INDUSTRY

U. S. Naval Consulting Board Names Directors For Work.

FIVE FROM SOUTH DAKOTA.

Bruce C. Yates, Allan J. Clark and William John Sharwood of Lead, With Morgan W. Davidson of Vermillion and Bryon Briggs Brackett of Brookings, Are Selected to Tabulate Industrial Preparedness.

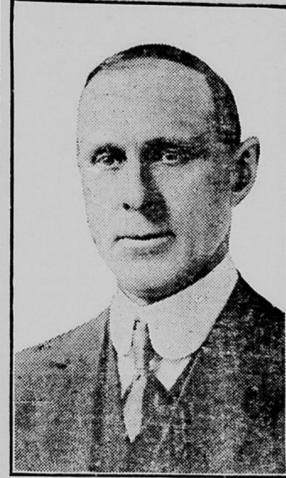
Howard E. Coffin, chairman of the Committee on Industrial Preparedness of the Naval Consulting Board of the United States, today announced the names of the 250 state directors, form-



BRUCE C. YATES.

years instructor in chemistry at the university in that state, was for the same length of time chemist for the Montana Mining company, later being for two years assistant professor of chemistry at the University of California as well as consulting metallurgical chemist for the United States bureau of mines in 1913-15.

Bruce C. Yates of Lead, from the American Society of Civil Engineers, is assistant superintendent of the Homestake Mining company, was born



1869, in West Virginia and educated at the University of Nebraska and is a member of the American Institute of Mining Engineers and the Lead Commercial club.

Allan J. Clark of Lead, from the American Institute of Mining Engineers, is metallurgist for the Homestake Mining company as well as a consulting engineer, was born, 1874, in New Jersey and educated at Columbia university and is a member of the Mining and Metallurgical Society of America and the Institution of Mining and Metallurgy of London.

Morgan W. Davidson of Vermillion from the American Society of Mechanical Engineers, is professor of mechanical engineering at the University of South Dakota, was born, 1881, in Maryland and educated at the Virginia Polytechnic institute, holds two degrees and is a member of the Society for the Promotion of Engineering Education. Professor Davidson has had several years' experience in locomotive testing, material inspecting and testing, and in the design, construction and operation of power plants, and for eleven years has taught mechanical engineering.

Bryon Briggs Brackett of Brookings, from the American Institute of Electrical Engineers, is professor of electrical engineering in the South Dakota State college; was born in New York state and educated at Syracuse and Johns Hopkins universities, holds three degrees, is a fellow of the American Association for the Advancement of Science and a member of the Society for the Promotion of Engineering Education and the Commercial club of Brookings. Professor Brackett is instructor in the electrical engineering



BYRON BRIGGS BRACKETT.

department at Johns Hopkins university for three years and at Union college for two years, taught physics at the Eastern District high school, Washington, for two years and electrical engineering at Rutgers college for the same period of time, was for five years professor of physics and electrical engineering at the Clarkson School of Technology, where he later taught electrical engineering in the full course; was inspector of torpedo cable for the United States army during the summer of 1898, electrical engineer for the Rowland Telegraphic company at Baltimore in 1900-1 and has held his present chair for seven years.

The state directors, who also become associate members of the naval consulting board, have just received appointment by the secretary of the navy. In making public their names Mr. Coffin said:

"The names and standing of these men speak for themselves. They have been selected by their own professional associates with the only standard that of efficiency and integrity. They work without pay; indeed, the services of many of them could not be bought. In my judgment they form a vast, flexible organization, the like of which has never been known in this or any other country of the world, and an organization, moreover, which from top to bottom is absolutely nonpolitical."

The directors from this state are as follows:

William John Sharwood of Lead, from the American Chemical society, is metallurgical chemist of the Homestake Mining company; was born 1867 in California and educated at the Royal School of Mines, London; holds two degrees and is a member of the Institute of Mining and Metallurgy, the American Institute of Mining Engineers and the Mining and Metallurgical Society of America. From 1887 to 1892 Mr. Sharwood was employed at gold mines in California, was for six

years instructor in chemistry at the university in that state, was for the same length of time chemist for the Montana Mining company, later being for two years assistant professor of chemistry at the University of California as well as consulting metallurgical chemist for the United States bureau of mines in 1913-15.

## Crab Locomotives.

The queerest locomotives are the types used in mining and called "crabs." Gliding into the black galleries of coal mines and halting at a crevice in the wall from which issues the distant ring of pick and shovel, the crab lets out a flexible tentacle (a steel cable) for perhaps 200 or 300 feet, drawing it back presently with a car of coal in tow. Feeling into the holes, first on one side, then on the other, it moves along and never fails to secure its prey. Finally, with a dozen or more cars in its wake, it proceeds to the shaft or outlet and delivers its booty to the crusher.

These crabs operate by trolley conductors. They run through the main passages of the mine. Each crab is furnished with an electrically operated drum, on which are carried 200 or 300 feet of steel cable. This is hauled into the side passages or drifts by a man, who couples the end to a loaded car, then gives a signal, and the crab does the rest.—George Frederick Stratton in St. Nicholas.

## Eccentric Paving.

It is related that when Maximilian Emanuel succeeded to the throne of Bavaria he celebrated the event by causing one of the roads leading to his palace to be paved with plates of burnished copper. This, gleaming in the sunshine, gave all the effect of the more precious metal—gold.

We are told also that Louis XIV. paved one of the courts at Versailles with squares of silver, each of which had recorded upon it some triumph of the French arms. In the center of the court stood a large tablet of gold in representation of the luxurious monarch's favorite emblem—the sun. Memoirs of the time of Louis make mention of a lodge erected to the love of his youth, the fair Louise de la Valliere. The approach was paved with mirrors, wherein was painted an allegory setting forth the undying devotion of the king to Louise.

## A Test of Youth.

You often see a woman at the market pinching the end of a chicken's breastbone to find out how tender—in other words, how young—the fowl is. Oddly enough, the same test with human beings is one of the most reliable known. If in advanced life the lower end of your breastbone feels elastic when pushed inward, you may assume that no important changes have yet taken place in your arteries or otherwise in your anatomical make-up.

The human breastbone is shaped like an ancient Roman sword, and the upper part of it is like the sword handle. Its point is a piece of cartilage, which anatomists call the "xiphoid" cartilage. The early hardening and stiffening of it indicate that the changes that accompany old age have prematurely begun.—Youth's Companion.

## Insect Sits on Its Eggs.

Family matters in the case of insects usually mean only the depositing of eggs in suitable situations for the independent development of the offspring, the parent insects often dying before the young appear. The earwig, however, provides a remarkable exception to the general rule, for it sits upon its fifty or more eggs until they are hatched, just as a bird would do, and, moreover, if the eggs get scattered it carefully collects them together again. In the early months of the year, when digging the soil, female earwigs may frequently be found together with their batch of eggs. At the slightest sign of danger the young ones huddle close to their mother, hiding beneath her body so far as it will cover so large a family.—Strand Magazine.

## Insect Wonders.

Nothing can exceed the perfection of the minutest parts of the insect organization in general. The finest strand in a spider's web, which can scarcely be seen, is said to be composed of no less than 4,000 threads. On a single wing of a butterfly have been found 100,000 scales and on that of a silk-moth 400,000, each of these minute scales being a marvel of beauty and completeness in itself. So thin are the wings of many insects that 50,000 placed over each other would only be a quarter of an inch thick, and yet, thin as they are, each is double.

## Elephants in Uganda.

"Elephants in Uganda have a peculiar aspect that I have not noticed elsewhere," writes a traveler. "They cover their bodies, as a protection against flies, with the bright red volcanic dust contained in the soil. This gives them a remarkable appearance, as instead of being a slaty gray, as in the Nile valley, their color when thus covered with dust resembles that of a chestnut horse."

## His Birthday Present.

Fair Customer—I want a birthday present for my husband. Dealer—Yes, mum. How would this old clock suit you? Fair Customer—Let me see. I've got a corner in my bond that will just do for it! And I've been wanting an old clock for a long time. Yes, that will do!

## Unhappiness.

They who have never known prosperity can hardly be said to be unhappy. It is from the remembrance of joys we have lost that the arrows of affliction are pointed.—Emile Zola.

## Not Jealous.

Mrs. Jawback—John, I do believe you are jealous of my first husband. Mr. Jawback—Well, no; I don't believe I'd call it jealousy. Envy is the word.

The only wealth which will not decay is knowledge.—Langford.

## True Fish Stories.

The Cyclosuma negrofasciatus will fight with the savage tenacity of a bulldog and will leap high out of the water in pursuit of a tantalizing finger.

The walking perch from India will climb out of the aquarium and take a stroll around the floor looking for another pool unless you put a wire over the top of his home.

The stishigashira has a round fat keprie body topped by a chubby cheeked cherub head, with the tiny eyes, small mouth and nose of a human being. Its coloring is marvelous, and it is considered sacred in Japan.

The angel fish is wider than it is long and has a chameleon-like quality of changing its color at will.

The Indian gouramis has arms with which it feels its way about or inspects anything new in the aquarium.

There are tailless fish and scaleless fish and fish without fins, blue fish, pink fish, lavender fish and particularly red, white and blue fish, but they are all goldfish, especially as to price.—Philadelphia North American.

## Abusing a True Friend.

The truest and most devoted friend that man ever had is the little inanimate bundle of nerves that stands guard by his bedside through the dead hours of the night, its palpitating little heart spreading cheer and confidence over the surrounding gloom. Yet man often forgets the debt of gratitude he owes this faithful and tireless little friend for the sleepless, watchful hours it subjects itself to in order that he may slumber in security and comfort, and when it sings its merry morning lay I have seen him, instead of bestowing fond caresses, reach from his warm quilts, grasp it ruthlessly and slam it into the farther and darkest corner of the room, crushing the dainty hands that seemed uplifted in an attitude of horror and protection, scornfully muttering such uncouth and unworthy reproach as "Hang that blinkety-blank alarm clock, anyhow!" then return to his snoring!—Zim in Cartoons Magazine.

## Stevenson's Brownies.

Stevenson maintained that much of his work was only partially original. His collaborators were the brownies who ran riot through his brain during the hours of sleep. He instances the case of "Dr. Jekyll and Mr. Hyde." "I had long been trying to write a story on this subject," he writes, "to find a body, a vehicle for that strong sense of man's double being which must at times come in upon and overwhelm the mind of every thinking creature. For two days I went about racking my brains for a plot of any sort, and on the second night I dreamed the scene at the window and a scene afterward split in two, in which Hyde, pursued for some crime, took the powder and underwent the change in the presence of his pursuers. All the rest was made awake and consciously, although I think I can trace in much of it the manner of my brownies."

## Lordy Disraeli.

Disraeli once told a woman that two possessions which were indispensable to other people he had always done without. "I made," she said, "every kind of conjecture, but without success, and on my asking him to enlighten me he solemnly answered that they were a watch and an umbrella. 'But how do you manage,' I asked, 'if there happens to be no clock in the room and you want to know the time?' 'I ring for a servant,' was the magniloquent reply. 'Well,' I continued, 'and what about the umbrella? What do you do, for instance, if you are in the park and are caught in a sudden shower?' 'I take refuge,' he replied, 'with a smile of excessive gallantry, 'under the umbrella of the first pretty woman I meet.'"

## A Warning.

"Watch out how you holler fer de worl ter look up at you when you gits ter de mountain top," said Brother Williams. "Of all time dat's de one time ter lay low, fer de worl will find you when it gits good an' ready. An' dis other thing is what you got to consider: De minute you hollers old man Trouble locates you an' sets his traps ter trip you an' send you rollin' down ter de bottom, whar you come from!"—Atlanta Constitution.

## Flower of the Air.

There is a plant in Chile and a similar one in Japan called the "flower of the air." It is so called because it appears to have no root and is never fixed to the earth. It twines around a dry tree or sterile rock. Each shoot produces two or three flowers like a lily—white, transparent and odoriferous. It is capable of being transported 600 to 700 miles and vegetates as it travels suspended on a twig.

## Perfect Machinery.

"Their household seems a perfect piece of machinery." "Yes; the wife's the governor, the children safety valves and the husband a crank."—Philadelphia Bulletin.

## His Views.

"Dear me, I forgot to send her an invitation to our wedding!" "I imagine it won't make much difference. We won't miss one pickle fork."—Kansas City Journal.

## Astronomy.

Astronomy is one of the most exact of the sciences. The powerful telescopes, the spectroscopes and other almost perfect instruments come pretty near telling the truth.

## Elephants' Toes.

The African elephant has two toes on its rear feet and three on its front feet, the Indian elephant has three on its rear feet and four on its front feet.

## Concerning Dreams.

Scientists assure us that the longest dream we ever have—even the dream that seems to carry us on through several days—actually occupies no more than a single second!

Some authorities maintain that if any one of our dreams were to last longer than a single second we should die. Other authorities are convinced that we do not dream at all when we are asleep, but only in the fraction of time when we are (as Shakespeare has expressed it) "twixt sleep and waking."

It is also argued that dreams are nothing but distorted ideas and images passing through the drowsy mind and being no more than extraordinary variations of things that have happened or of things that we have thought or read in our waking moments; they can have no possible association with our future. But, on the other hand, dreams have been credited with prophetic meanings since the days when the world was young, and dream books are still published and purchased and consulted by the million.

## Puss in Boots.

No collection of fairy tales is complete without "Puss in Boots," and it is interesting to know that it has amused the children of a hundred generations. The various versions of the story differ materially, however. It is believed that the Zanzibar version is the original. There the man is ungrateful to the clever cat and is punished by awaking to find his prosperity a dream. In France, Italy and India the cat is a swindler and the Marquis of Carrabas is his accomplice. In Russia and Sicily "Puss in Boots" is a moral story and the cat helps the man from motives of gratitude. When Cruikshank illustrated "Puss in Boots" he rewrote it and introduced the moral motive of gratitude in the cat, but the American version does not point out any motive. Why should the cat help his master to title and riches? In our story he is a weak fellow who does nothing to help himself, and we feel that the cat is throwing his energies away on an idler.—St. Louis Globe-Democrat.

## Daddy and the Kiddies.

We'll call him "daddy," because that's what his kiddies call him, and this is an intimate story of "daddy" and his two youngsters.

Frequently "mother" and the kiddies go to the picture show in the evening while "daddy" stays home alone.

"I'm too tired to go along," is his reply to invitations.

But the other evening the pleadings of the youngsters won. "Daddy" enjoyed the pictures, but he enjoyed the kiddies' fun more.

When the trip home was made and the youngsters tucked in bed "daddy" heard one youngster say to the other:

"Don't you think the show's lots better when 'daddy' goes with us?"

The answer came, "Lots better."

And how many "daddies" would cease to be "too tired" if they realized how much the kiddies yearn for them!—Detroit Free Press.

## He Had Patience.

An elderly gentleman was rambling along a country road one afternoon when he saw a small boy who had been sitting on the bank of a creek roll up his fishing line, pick up his can and start away from the piscatorial scenery. "You shouldn't give up so soon, my boy," remarked the elderly one chidingly. "The fish will be biting better in an hour or two."

"I know that," answered the boy a little sadly, "but I am—"

"You give up too quickly," interjected the other. "The next time you come out here you want to bring more patience with you."

"Tain't that, mister," said the boy, sighing deeply. "I got plenty o' patience, but I hain't got no bait."

## Protection.

A man who employed a number of boys to pick raspberries was quite anxious to protect them from mosquitoes, so he had veils made to tie down around the neck. The boys were very grateful for his kindness until they found that there were no mosquitoes in that locality and also that they couldn't eat any berries with those veils on. The "protection" was of another sort.—Pittsburgh Press.

## Expurgating It.

"Elfreda, what did your father say when he heard that I had been here calling on you?"

"He said you were a numskull, a mollycoddle and a jolthead."

"Is that all?"

"That's all, Guy—except the adjectives."—Chicago Tribune.

## Strategy.

"Pa, what is strategy?"

"Well, my son, suppose you should see a man coming toward you with a borrowing look in his eye; then it is strategy to hurry and ask him for a loan before he can ask you."—Boston Transcript.

## Good Form.

Aunt—You'll be late for the party, won't you, dear? Niece—Oh, no, auntie. In our set nobody goes to a party until everybody else gets there.—Boston Transcript.

## Vicarious.

Nodd—How do you like your chauffeur? Todd—I don't know anything about him personally, but my wife and daughter tell me he drives my car very well.—Judge.

## Jokes on the Men.

Mrs. A.—Do you ever read the jokes in the newspapers? Mrs. B.—Only the jokes on the men—the marriage notices, you know.—Exchange.

## Athletic Mosquitoes.

Singapore is on the Malay peninsula, that sloop tongue that hangs down from the southeast corner of India. A Singapore mosquito will lie slothfully around all day, not turning a hand, but the moment it sees you retire for the night and pull down the bed netting it leaps to its feet, trembling with eagerness. They will pass up thousands of Chinese and Malays a few blocks away, sleeping without cover of any kind, to come and work and plan the whole night through to get just one taste of white meat. Their persistence is wonderful. An ant in comparison to a Singapore mosquito is a happy-go-lucky creature, with no thought of the morrow. Here in the luxurious tropics mosquitoes grow to splendid proportions, perfectly formed and splendidly muscled, and in any catch-as-catch-can conflict can defend themselves against all comers, irrespective of nationality. In a clinch they have a way of balancing on their tails and leaping on to their opponent and tearing him with their hind feet, after the manner of the cornered Australian kangaroo.—Homer Croy in Leslie's.

## Tiger Sharks.

When a Hawaiian sees a shark near the surface with eyes which shine red, as though they had red glass in them, he will not go in the water or even on the water or if he is on the water he will get to shore, for the red eyed fish is the tiger shark, and it does not hesitate to attack. They will not only attack a man in the water, but they will follow a fisherman in a canoe after he has taken a lot of fish aboard, and it is said they will attack and overturn a canoe if they are very hungry.

Men who know fish do not want to have anything to do with the tiger shark.

A shark does not turn on its back to bite, as is the common opinion of those who have not lived near shark infested waters. It turns on its side and when in this position can travel almost as fast and handle itself almost as well as when it is in its natural position.—Honolulu Star.

## Frozen Food in Siberia.

The markets of Irkutsk, in Siberia, are an interesting sight, for the products offered for sale are in most cases frozen solid. Fish are piled up in stacks like so much cordwood, and meat likewise. All kinds of fowl are similarly frozen and piled up. Some animals brought into the market whole are propped up on their legs and have the appearance of being actually alive, and as one goes through the markets one seems to be surrounded by living pigs, sheep, oxen and fowls standing up. But, stranger yet, even the liquids are frozen solid and sold in blocks. Milk is frozen into a block in this way and with a string or a stick frozen into and projecting from it. This, it is said, is for the convenience of the purchaser, who is thus enabled to carry his milk by the string or stick handle.

## Cromwell and Quinine.

We owe to Sir Clements Markham the introduction of quinine yielding trees to British India and the consequent cheapening of the drug from a guinea to a halfpenny an ounce in Calcutta, but the medicinal properties of cinchona bark had long been known. They were discovered by the Jesuits, after whom it was called Jesuits' bark. Concerning that, Sir Clements used to relate an odd coincidence. Oliver Cromwell died of tertian ague, and quinine might have saved him. In the very newspaper in which his death was announced, the Mercurius Politicus, there was an advertisement of Jesuits' bark for sale. But the name of Jesuit was abhorrent to the Puritans, and hence Cromwell's medical advisers would have nothing to do with it.—London Chronicle.

## "Valley of Dried Bones."

The island of Jamaica possesses a "valley of dried bones." It is near the Cuncunuma gap, in the Maroon country. This valley, though in the heart of the "wet country," is bare of leaf and life. The limestone rock is hot. Giant trees, which seem to have been blighted suddenly, stand up gaunt and dead. Although vegetation seems to have been dense here in former years, nothing will grow now. During the hot season the temperature is almost unbearable. It is visited by seismic disturbances, which cause the dead trees and hot stones to rattle like dry bones.

## Too Old to Be Fooled.

A man entered a grocery store and ordered some eggs. "That man always buys fresh eggs," whispered a small egg, peeping out from the depths of the basket. "Huh," scoffed the big egg on top, "yuh can't tell me that. I wasn't laid yesterday."—Judge.

## A Sure Way.

There are several methods whereby pickpockets may be avoided on crowded street cars, but the surest way is to keep your money in the bank in your wife's name.—Kansas City Star.

## Impossible.

"Do you think it safe to marry on \$25 a week?" "My boy, no amount of money can guarantee marriage to be safe."—Detroit Free Press.

## To Live Long.

If you wish to be a Methuselah you will have to quit doing all the things that make it worth while not to be one.—St. Louis Post-Dispatch.

Difficulties are not to be sought, but when they come they should be accepted as calls to heroic deeds.