SAYS ERRORS IN NAVY UNFIT IT FOR BATTLE

Expert Declares the Pseudo Fighting Ships Are Merely Death Traps.

ARMOR BELT IS TOO LOW.

Defects in Construction Pointed Out and Promotion System Is Secret.

Henry Reuterdahl, associate of the United States Naval Institute and American editor of "Fighting Ships," is the author of a startling article on "The Needs of Our Navy" in the January McClure's. Mr. Reuterdahl's expertness on naval matters is not disputed and neither is his patriotism. He agrees with President Roosevelt that a navy must be built "and all its training given in time of peace" and with this in view he exposes defects in our first-class battle ships and armored cruisers which all but make them useless as a efficient units in a fleet on heavy sea and in real action.

Mr. Reuterdahl's criticisms appear to be the more amazing on account of the contention that most, if not all of the weak points he emphasizes, will be acknowledged by sea-going officers, "or, if the reader is sufficiently interested, by the testimony of his own eyes."

His principal points are the following:

That the shell-proof armor of the American battle ships is virtually below the water line where it will do no good, leaving the broad side of the vessel exposed to the shells of the enemy.

That this defect has been pointed out time and again; that other nations years ago recognized it as fatal and now have armor wrapped around the sides of their war vessels from five to seven feet above the water line.

That, despite repeated accidents on board our ships, the Navy Department year after year has approved of plans by which the greatest guns on the ships are directly above an open shaft leading to the powder magazine.

That other nations long since recognized the criminal stupidity of thus endangering the lives of officers and men and have remedied the defect by use of common sense and ordinary precautionary measures.

That, without regard to the protests of experts, our battle ships have been built so low that if the sea is heavy and ships are in action, the sea would wash over the vessels, render some of their most effective guns useless and practically leave the ship to the mercy of the enemy.

The officers in the American navy who command the battle ships and squadrons are too old; that under existing conditions young men cannot attain command, and that the service is badly crippled as a result.

That there is too much "bureau management" in Washington; too much red tape in the Navy Department; that American genius is stifled because of the Bureau's immersion in details, and that with the Secretary of the Navy a civilian, he should have a board of expert advisers.

Other matters are dwelt on, but the foregoing are by far the most important. An afternoon's fight on water sealed Russia's fate in the recent war with Japan, says Mr. Reuterdahl, and the same may well be true of the next war into which this nation is plunged. The issue is so important and the stake so tremendous that the sea power which is prepared in every respect to meet the crisis will be the victor.

Muensterberg on Charity.

Prof. Emil Muensterberg, head of the public charities of Berlin, was the principal speaker at the celebration of the twenty-fifth anniversary of the New York Charity Organization Society at Carnegie Hall recently, along with Mayor McClellan, Gov. Hughes and others. Prof. Muensterberg said that charity work had to be undertaken now in "the twilight of widespread egotism and selfishness," but that the work had changed from a purely philanthropic to a social conception. He finds that private charity does in this country the work done by the government in Germany.

DISASTROUS MINE ACCIDENTS IN RECENT YEARS

	Lives lost.
1894—Albion colliery, South Wales	290
1902—Fraterville, Tenn.	216
1902—Rolling Mill mine, Pennsylvania	105
1903—Hanna, Wyoming	175
1904—Lackawanna mine, Pennsylvania	10
1904—Tercio, California	21
1905—Virginia City, Ala.	152
1905—Ziegler, Ill.	35
1905—Welsh coal mine	120
1905—Diamondville, Wyoming	18
1905—Kurtsiak, Russia	278
1905—M., K. & T. Coal Company	13
1905—Princeton, Ind.	43
1905—Coal mine in Prussia	55
1905—Wilcox, W. Va.	35
1906—Bluefields, W. Va.	21
1906—Johnstown, Pa.	25
1906—Century, W. Va.	15
1906—Durham, England	25
1906—Dutchman mine, Blossburg, N. M.	15
1906—Courriere mine, near Calais, France	1,090
1906—Japan	230
1906—Oakhill, W. Va.	28
1906—West Fork, Va.	75
1906—Querto, Colo.	22
1907—Saarius, Prussia	22
1907—Primero, Colo.	20
1907—Fayetteville, W. Va.	80
1907—Saarbruck, Prussia	200
1907—Las Esperanzas, Mexico	123
1907—Forbach, Germany	75
1907—Monongahela, Pa.	30
1907—Toyoha, Japan	670
1907—Tsing Tau, China	112
1907—Negaunee, Mich.	17
1907—Monongah, W. Va.	398
1907—Yolande, Ala.	81

FARMING IN A DESERT.

There Are Colonizing Possibilities Even in Death Valley.

The craze of "homestaking" which is seems to have reached its limit in the choice of Death Valley as a colonizing possibility. With the idea of transforming the most arid and most desolate portion of the great American desert into farm land, a number of tracts have been homestaked, irrigation systems have been planned, and other preparations are now in progress for beginning the reclamation of Death Valley. A railroad is already built from Greenwater, at the southern end of the valley, to the borax works owned by the celebrated "Borax" Smith of 20-mule team fame, and there is an automobile stage line through the valley.

Even enthusiasts do not claim that piping water from Telescope Peak across the Funeral range into the valley is also under consideration.

A BLOT ON THE LAST CHAPTER.

The Comic Side of The News

Money is suffering from bad circulation.

An Aurora (Ill.) physician has discovered that peanuts are a beauty diet. This ought to be a circus for some people.

An Eastern banker says, "We want more common sense." We want also more dollars, which are not so common now.

If prices of bread and meat keep on coming down, pretty soon the average man can afford to eat three meals a day.

Chief Sprybuck, the Indian who drank a quart of blue paint, is carrying the "decorative interior" fad to an extreme.

With 1,300,000 divorce suits in ten years, the United States is plainly in need of a national "Stay-Married Association."

After a while it may dawn on the army recruiters that the average soldier doesn't look upon $13 a month as any great graft.

Pennsylvania miser who spent only 3 cents last year is dead. He just couldn't bear the increase in living expenses.

Secretary Cortelyou is trying to impress us with the fact that stockings were made to be worn and not to hoard money in.

James J. Hill says the railroads need billions of dollars. From present prospects, it will be some time before they get 'em.

An Italian count one American heiress married turned out to be an ex-convict. Some of the other counts haven't yet been convicted.

To Produce Socialistic Plays.

The Socialist Stage Society of New York City has for its object the production of plays in which socialism is the keynote. Its manager, Mr. Hopp, says that when the society is in good running order it will be able to assure a manager an audience of 5,000 at the start for a satisfactory play. In the meantime it intends to produce its own plays, which it is claimed can be done for a very small actual cash outlay.

EARLY RAILROAD DAYS

First Charter in Country Obtained in 1823—Sails Attached to Engines.

ACCIDENTS VERY VERY COMMON

Barrier Cars as a Remedy—Difficulty in Getting Wood and Water.

In 1823, the first charter was obtained for a railroad in the United States. It was for a line from Philadelphia to a point on the Susquehanna river, but was never built. On the announcement of the project some one asked one of the Baltimore newspapers, "What is a railroad, anyhow?"

The editor was forced to reply that he did not know, but that "perhaps some other correspondent can tell."

Seven years later on the little wooden track along the Lackawanna creek the first locomotive had its trial. The experiment was far from successful, and for a number of years afterward the train on most of the railroads continued to be drawn by horses.

The first locomotive on the Baltimore and Ohio had sails attached. So did the cars. These sails were hoisted when the wind was in the right direction so as to help the locomotive.

The rivalry between the railroads using locomotives and those using horses was very bitter. In August, 1830, an actual trial of speed was held between a horse and one of the pioneer locomotives, which did not result in favor of the locomotive, the race was on the B. & O., the locomotive being one built by Peter Cooper, who also acted as engineer.

The horse, a gallant gray, was in the habit of pulling a car on a track parallel to that used by the locomotive. At first the gray had the better of the race, but when he was a quarter of a mile ahead Mr. Cooper succeeded in getting up enough steam to pass the horse amid terrific applause.

At that moment a band slipped from a pulley and though Mr. Cooper lacerated his hands trying to replace it, the engine stopped, the horse passed it and came in the winner.

As there were no brakes on the early trains, they used to stop and start with jolts which threw the passengers across the car. The coupling was with chains having two or three feet of slack which the engine in starting took up with a series of fierce jerks. The shock on stopping was even worse and "never failed to send the passenger flying."

There were no whistles in the old days. Signals were given by pushing up the valve on the dome by hand and letting the steam escape with a loud hissing noise. On the New Castle and Frenchtown railroad when the signal was heard the slaves around the station would rush to the arriving train, seize hold of it and pull back with all their might while the agent stuck a piece of wood through a wheel.

There were so many collisions and explosions that some Southern railroads introduced what they called a barrier car between the locomotive and the passenger coaches of the train. This barrier car consisted of a platform on wheels upon which were piled big bales of cotton, and it was claimed it would safeguard the passengers in two ways—it would protect them from the blowing up of the locomotive and would form a soft cushion upon which the passengers could land in the event of a collision. There is no record of how this experiment worked out.

Horatio Allen states that when the South Carolina railroad was completed, with its 100 miles of track, operation over such an extensive line was then unprecedented. In making arrangements for this unusual undertaking one of the first things that occurred to him was that the locomotives would have to run at night as well as day, and in the absence of a headlight he built on an open platform car stationed in front of the locomotive, a fire of pine knots surrounded with sand, which furnished the requisite illumination of the route traversed.

On most of the other lines no substitutes for headlights were used. The trains traveled slowly through the dark. Night trips, however, were avoided as much as possible. The first headlight on a locomotive was used by the Boston and Worcester in 1840.

The original American locomotives were nearly all wood burners, and during a protracted period, before the invention of spark arresters, the flying sparks caused a great amount of damage and annoyance. Interwoven with this difficulty was a necessity for using smokestacks many times larger than those now in use—too high indeed to pass under overhead bridges or the roofs of covered wooden bridges.

To overcome this difficulty the smokestacks of many of the locomotives were jointed or hinged so that they could be lowered when trains were proceeding over or under bridges. This naturally greatly increased the danger of setting fire to the wooden bridges, and it was customary for a watchman to follow every train over or under the bridges, carrying a bucket of water for the purpose of extinguishing fires. Notwithstanding this precaution the burning of bridges was a common occurrence.

On most of the early railroads the cars were at first entirely uncovered, being in fact merely platform cars with a row of seats along each side. The passengers were entirely unprotected from the sun, rain, smoke or cinders. A passenger who took a trip over the Mohawk Valley railroad when this company had opened its line between Albany and Schenectady thus describes his experience:

"They used dry pitch pine for fuel, and there being no smoke or spark catcher to the chimney or smokestack the volume of black smoke strongly impregnated with sparks, coal and cinders, came pouring back the whole length of the train. Each of the passengers who had an umbrella raised it as a protection against the smoke and fire.

"They were found to be but a momentary protection, for I think in the first mile the last one went overboard, all having had their covers burnt off by the flames, when a general melee took place among the passengers, each whipping his neighbor to put out the fire. They presented a very motley appearance on arrival at the first station."

Telegraphic service available for railway service was not established until about 1850. In the absence of the telegraph and the lack of any established system of signaling the early railroads adopted novel methods for conveying information.

The New Castle and Frenchtown railroad had a primitive telegraph in operation as early as 1837. A description of it says that "the poles were of cedar, quite like those now in use, and had cleats fastened on them, forming a sort of Jacob's ladder."

The operator would go to the top of the pole forming his station and with his spy-glass sight the next station in the direction of the approaching train. If the train was coming and the signal showed a flag, it meant that all was well, and the operator would pass the signal along to the next station below.

If a ball was shown, and no train in sight, it signified an accident or a delay of the connecting steamboat. These signals were methodically exchanged until an understanding was had all along the road.

The facilities furnished by the railroads were at first much more fully appreciated by travelers than by the shippers of freight. The speed of the trains, amounting at times to as much as twenty-five or thirty miles an hour, was a source of unabated wonder to the passengers, who had hitherto traveled on the slowly moving canal boats and stage coaches.

In the matter of freight traffic the railroads were at first unable to compete with the canals. Of a prominent Massachusetts railroad it is said that a motion was made at an annual meeting to let the privilege of carrying freight on its lines to some responsible person for $1,500 a year.

There are many accounts of the pitiful state of impecuniosity to which some of the railroads were reduced. Cash being exhausted, and receivers' certificates having not been invented, when operations proved unprofitable there was no basis for credit.

Men were sometimes put on the tender with a sawhorse and saw, and when the engine ran out of wood these men would take up their saw and cut up a new supply of fuel from the nearest woods. Often the passengers would get off the train and help in the cutting of the wood.

The railroads were often too poor to pay for the fuel thus secured, and there are many stories in the old newspapers of encounters between train crews and the farmers who caught them cutting down their trees. The complaints of the high-handed methods of the grasping railroad corporations, their defiance of the law of the land and the rights of others, sound strangely familiar to-day.—Van Norden Magazine.

EAT SOUR MILK AND LIVE LONG

Doctors Dwell on the Merits of Zoghurt, a Bulgarian Food.

The latest producer of long life discovered by European physiologists is zoghurt, a preparation of sour milk, says the Washington Star. Prof. Elias Metchnikow of the Pasteur Institute, was the first to direct attention to it, but no sooner had he done so than Prof. Reinhardt of Vienna announced that he had known all about it for years and that it was a food in general use in country parts of Bulgaria.

Prof. Metchnikow's theory is that the ferment contained in the milk attacks certain bacteria which develop in the human system and have poisonous effects. He has proved by experiment, he says, that the zoghurt has an absolutely disinfecting influence and that by destroying the poisonous germs it not only prevents actual disease, but also arrests the process of aging.

In a paper published in the Austrian Review Dr. Reinhardt tells how the Bulgarians prepare the zoghurt. Cow's or goat's milk is boiled in an open vessel until it is reduced to about half its original volume.

Then it is cooled and when it reaches a temperature of about 115 degrees some zoghurt already prepared is stirred into it and it is left to ferment. The germ, which the doctor calls maya fungus, acts quickly and the zoghurt is ready for use in a day.

Dr. Reinhardt thinks the health-giving qualities of the preparation are amply proved by the fact that Bulgaria, in a population of 4,000,000, has 3,800 zoghurt eaters of 100 years of age and upward, while in the whole German empire, with 61,000,000 people, there are only seventy-one centenarians.