

EFFICIENCY MAY BE INTRODUCED IN NAVY AFFAIRS

Secretary Meyer Would Force Business End of War Department Into Hands of Trained Engineers.

Washington, Sept. 2.—The United States navy will soon lead the nation in the largest, most complete, and most spectacular test of new "science of management" if plans under contemplation by Secretary of the Navy Meyer are put into effect. In fact, it might well be said that they are already under way, as Secretary Meyer is now in England for the purpose of studying the English system of navy administration.

The secretary proposes to introduce into American navy yards that new creature of modern industrialism—the "efficiency engineer." He views his department as the manager of a giant corporation looking upon his vast plants—as a problem in business and manufacture. Though the navy never pays dividends in dollars, Secretary Meyer holds that its administration should be as business-like and as efficient as if he and the higher officials assisting him had to report each year to a board of directors who were demanding upon the part of the stockholders that the navy be operated at a profit. The navy has no income from sales of its products, as has an ordinary business or manufacturing firm, since its revenues are in the form of appropriations from congress, so the secretary and his aides are concentrating their attention upon watching the dollars as they go out, with the aim of making each dollar expended produce its exact equivalent in work done.

Eight Navy Yards. There are now maintained by the government eight great navy yards, each so equipped that its force can construct almost anything, from a battleship to a cartridge. Thousands of men are employed, vast sums invested in materials and man-power, and there is an annual output valued at millions. At least, it costs millions to produce this output, and it is now proposed, if possible, to reduce this cost or increase the output, or both, by the introduction of scientific management.

In preparation for this step, which is expected to revolutionize navy yard methods, Secretary Meyer has already detailed several navy officers to study principles of scientific management. These officers have been engaged for some weeks in visiting industrial plants which are either experimenting with, or have adopted, the new scheme of operation in manufacturing. Also, he has had several men noted as exponents of "scientific" shop management here at the navy yards, watching the operation of the battleships, which are themselves huge problems in shop management and studying the relation of the battleship to the navy yard. By this study, Secretary Meyer believes the navy experts will be better able to suggest improvement in the navy yards, having ascertained what the battleship requires of the yard.

Navy Self Sustaining. Once the system is installed, it will have to be operated almost entirely by the navy itself, as the navy is practically self sustaining in every detail. Therefore, a campaign of education and courses of training among the officers themselves are necessary before the new system will be fully established in the navy yards of the Atlantic and Pacific coasts.

The plan will eventually be extended to the battleships themselves. In selecting the navy yards for the first application of the principles of scientific management, Secretary Meyer reasons thus:

Efficiency of the Fleet. "The fleet is the thing. That is, everything done for the navy should work toward the greater efficiency of the navy as a self sustaining, seagoing aggregation of ships with the highest possible potential fighting power. The navy yards exist only for the purpose of building and maintaining battleships and other naval vessels.

Of themselves, the yards have no reason for existing, therefore, progress in the navy yards consists in making them better able to care for the fleet. As the battleships begin and end their existence in navy yards, and visit them frequently for repairs and alterations, the navy yards exist primarily the efficiency of the battleship. Therefore, to increase the efficiency of the fleet, the yards themselves must first be improved, to give better and cheaper methods of construction and repair."

Engineer in Charge. Hence, the application of the principles of scientific management to the navy yards before extending it in all its detail to the battleships themselves.

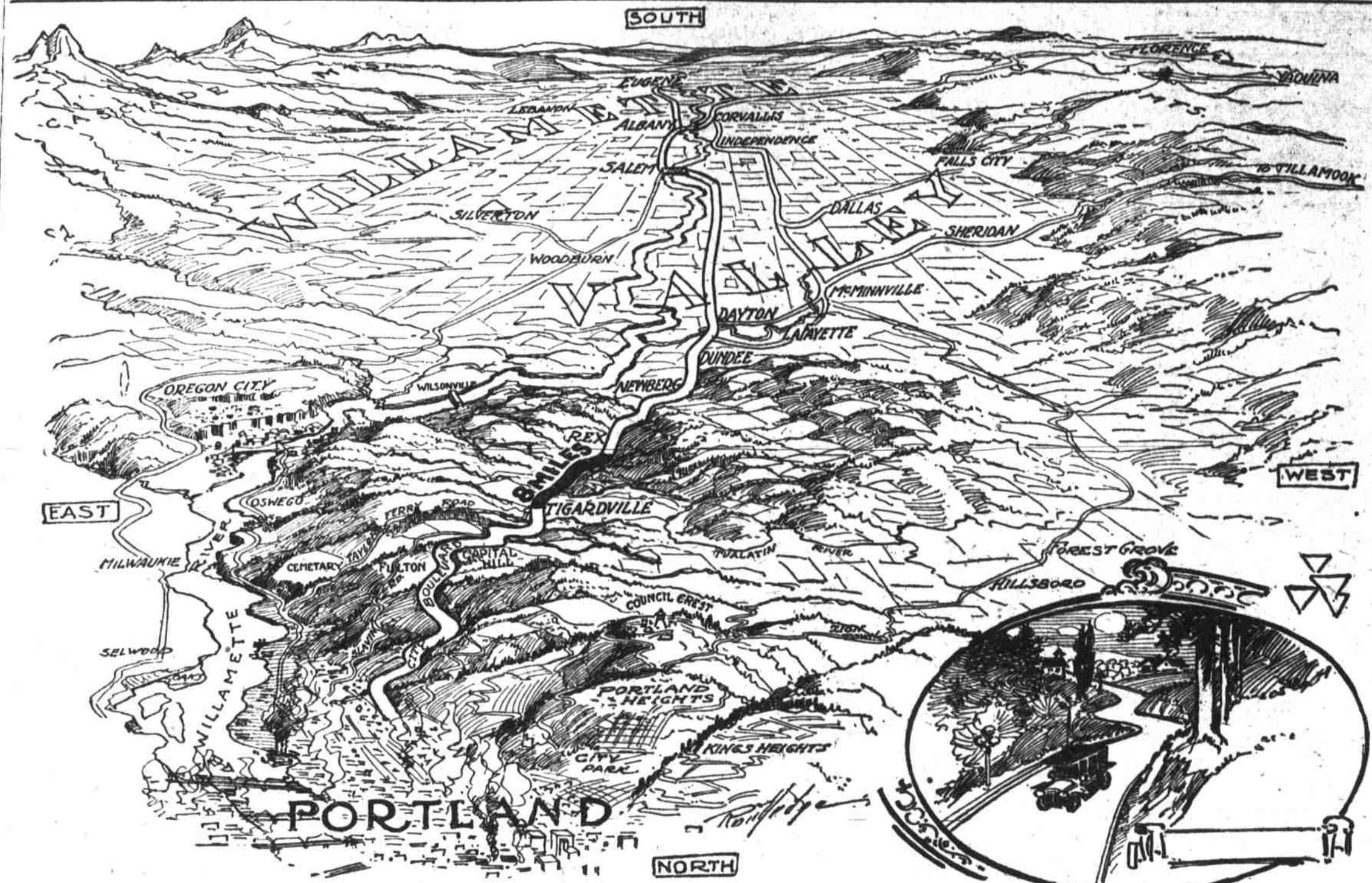
According to the present plan, each yard will have as its active head an officer who will fill the requirements of an "efficiency engineer." There will still be officers in charge of the different details of the navy yard plants, as the power plant, the department of design, the purchasing department, the ship department and the constructing department, but it will be the task of the efficiency engineer to coordinate all these factors and many others for the one great controlling purpose of efficient and economical production.

He must supervise not only the direction of the sources of power in nature, but as working upon the machines which turn out the guns or other products used in battleship construction or repair. More than that, however, he must include under his direction the human element, as represented by the men operating the machines, now so inefficient in their variety and use as to perform almost any task which can be done by hand. The industrial engineer, under scientific management, must not only be a man of technical skill, in directing a great manufacturing plant, but he must also be able to manage men and determine policies in fields which the financial or commercial man has heretofore considered exclusively his.

Must Study Economic Side. The first task of the efficiency engineer under scientific management, is to make what are called, in the language of the new science "assays." That is, he must analyze the business with which he is concerned. In the navy yards, he will be obliged to collect and tabulate statistics about and determine accurately the cost of every operation from making a 14 inch gun to putting rivets in a piece of armor plate.

Willamette Valley Is Able to Support Over Million and a Half Population

George E. Waggoner, Good Roads Advocate, Tells Why Rex-Tigardville Road Should Be Improved; Highway Under Present Condition Colossal Disgrace, He Says—Willamette Valley Largest Combined Area of Rich Land in the World—Work on Road Already Commenced—Magnificent Highway When Completed



Perspective map showing proposed road improvement between Portland and the Willamette valley. Black space shows where good roads advocates propose to improve stretch between Rex and Tigardville in Washington county.

How the improvement of the eight-mile stretch of road between Rex and Tigardville in Washington county will establish important trade and transportation connection between Portland, nearly all the Willamette valley and much of the coast, is vividly depicted in the birdseye sketch of the Willamette valley made by Artist Routledge for the Rex-Tigardville road improvement committee. What this road will mean to the Willamette valley and to Portland, and how important the investment is related by George E. Waggoner, president of the Yamhill Automobile and Commercial club good roads association

in a statement made yesterday which is as follows: "The Willamette valley is the largest combined area of rich land of the world. "Surrounded by thousands of acres of foothills, to supply the world for all time to come with Oregon's famous fruits, then back of this still, one of the largest if not the largest standing bodies of timber of the entire continent. "This valley now contains a population of about 150,000 people. It will support an increase of 10 times its present population. Give us western Oregon alone. Cut off the balance of the state, take away

one-half of Washington (its natural territory) and that vast area drained by the Columbia and its tributaries and Portland could still know she would some day have a million. It is nothing less than a colossal disgrace that there is not a passable highway between Portland and this, the most fertile and beautiful valley of the world. This stretch of good road under consideration runs through a mountainous and unimportant portion of Washington county and will never be thoroughly improved by that county except through assistance and it is fair that the Willamette valley and Portland should join hands in the work. It is

the gateway for development of the valley, the growth of Portland, the gateway to hundreds of miles of good roads. "Work has already commenced, it can not be carried to completion unless the fund is completed. Subscriptions may be sent to The Journal or Commercial club. It takes hard work to raise money by subscriptions and any subscription however small, will be greatly appreciated. The name and amount subscribed will be published in one list in the papers. The treasurer is under bonds, there are no salaried officers. The work is not being done by contract, but by day labor under supervision of a first class road builder and Governor West will supply convict labor. The road will

be a magnificent highway when completed and a credit to the state. Everyone knows the cause is worthy and it is hoped that those who are able to send in a subscription will kindly do so."

these materials from one process to another during manufacture, the general arrangement of the plant, and the effect of this arrangement upon economy of operation.

Gathering Facts in Mass. A distinct feature of this "assay" work, and in fact, what is considered its real object, is the reduction of data thus gathered to graphic form. Experts declare that it is nothing less than wonderful to see the amount of new knowledge a manufacturer may gain about a business with which he believes himself thoroughly familiar by the plotting of various sorts of data in charts.

On these, for example, will be charted, so as to visualize them, the movements of various materials from place to place in a navy yard in connection with installing the electrical system in a 27,000 ton battleship. By this method, it is claimed, wastes of time and labor which might remain buried forever in a page of statistics, or a page of reports, become instantly revealed. Once discovered, it is claimed the problem of rectifying these errors, or eliminating waste, is easy.

Seeking New Methods. The second phase of industrial engineering, sometimes called the active or creative branch, as distinguished from the "assay," or passive side, is that which effects improvements when the assay has shown where they are needed; that devises new methods and processes, introduces economies, develops new ideas, finding new ways of doing an old thing, or substituting a new operation that is better than the old.

Above all things, and at all times, it will be the duty of the navy officers placed in navy yards to act as industrial engineers to study constantly the question of the equivalence between the dollars expended and the thing secured.

The most difficult problem which scientific management has undertaken

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to solve is the labor problem. Though the navy at sea is manned and the battleships sustained, by men enlisted, and paid a stated sum monthly, instead of wages for the work they do, in the navy yards civilian employees are used almost exclusively. The navy, therefore, on shore, is up against the labor problem as much as anyone, and, in many respects, the labor problem in the navy is even more distressing than in private industrial plants.

As the navy yards offer such a vast field for a test of scientific management, industrial operators all over the country are watching with much interest the secretary's preparations, and upon his success, it is believed, will depend largely the rapidity of the spread of the scientific management schemes, and the increase in the number of "industrial engineers."

A Medicinal Dinner. From Walnuts and Wine. Sallie, a dainty cook down in Virginia, has been taught by her mistress to cook chickens en casserole—an accomplishment in which she takes great pride. It is always done on occasions of state, and Sallie hunts up company to show her prowess. Sunday morning recently she came in gleefully with the remark: "Yonder come Mr. Clifford up de road to see Miss Judith. Hadn't I better cook the chickens in castor oil?"

Small mirrors are mounted on each side of a new shoe salesman's stool to give a customer side views of a shoe he is trying on and also to afford a degree of privacy.

Moderate drinkers always hand themselves the worst of it. A young man, bright as a newly minted dollar, went into business for himself in the outskirts of the city about a year ago. He did well at the start. Then things began to go badly. He couldn't discover any reason for the sudden change, but he suddenly stood and saw himself in the light of truth. He was a drinker, in "moderation," as he put it.

"I never get drunk in my life," he said. "I never reached the point where liquor affected me, but lately I am beginning to wonder if drink is not getting the best of me."

It was a blue and discouraged inquirer who came to The Neal Institute and told his story. When business was moving slowly he would go out for a drink. He never counted upon staying away from the store more than five or

ten minutes, but in the saloon he would meet friends and minutes grew to half hours, often hours. Meanwhile customers coming to his store found his wife in charge. It was hard for her to clinch a sale, and many a time the absence of the husband at the saloon cost a sale. When the man did return, it was with the odor of liquor on his breath, something which repelled good trade. Many a woman customer catching a whiff of the alcohol as she entered the store would go right on out.

This is no fanciful picture. It is a clear recital of a suburban business that was all but wrecked by moderate drink. The owner realized in time that he did need The Neal Treatment.

The Neal Treatment, there administered by regular physicians, is purely a vegetable remedy, taken internally and with no hypodermic injections. What the world calls desire for liquor is simply the natural result of alcoholic poison which is found in the system of all drinkers. The Neal Treatment neutralizes and eliminates all the poison and all desire for drink goes with the poison.

Guests at The Neal Institute enjoy all the privacy and comforts of home, hotel or club. There is no publicity. If you have a friend who needs the Neal Treatment, it would be a splendid thing to put him in the way of getting rid of a habit that sooner or later will lead to the curtailment of his income or something worse.

A week-end vacation at The Neal Institute will add to the happiness and earning power of any drinking man.

For further information and booklet, address The Neal Institute, 354 Hall Street, Portland, Or. Phone Marshall 2400.

LABOR DAY MONDAY, SEPTEMBER 4 \$2 ROUND TRIP ASTORIA CENTENNIAL SPECIAL TRAIN LEAVES NORTH BANK STATION, PORTLAND, 8.00 A. M., MONDAY, RETURNING LEAVES ASTORIA 11:30 P. M.

AFTER SPECTACULAR NIGHT PERFORMANCE OF "The Bridge of the Gods" AND THE REGATTA RACES IN AFTERNOON Another Train Leaves Portland 9:20 A. M., Returning Leaves Astoria 7:05 P. M. \$3 ROUND TRIP, CLATSOP BEACH POINTS TICKETS DAILY UNTIL SEPT. 10, LIMIT MONDAY. ASTORIA CENTENNIAL STOPOVERS PACIFIC COAST REGATTA ALL WEEK Regular trains leave Portland 8 A. M., 9:20 A. M., 6:30 P. M. daily, and an additional train 2:30 P. M. Saturday. September at Clatsop Beach The best days of the season. Hotels at Gearhart and Seaside open all the year. TICKETS, CENTENNIAL FOLDERS AND DETAILS AT CITY TICKET OFFICE, FIFTH AND STARK NORTH BANK STATION, ELEVENTH AND HOYT STREETS.

FORMULA NEEDED FOR HORSEPOWER

Auto Association to Take Up Question of Revising Designs.

It seems probable that the automobile associations will soon be obliged to take up the problem of devising a formula that will give a fair approximation of the horsepower developed by automobiles. As is well known, the old A. L. M. formula has become grossly inaccurate for many cars through their advanced motor construction and advanced engine design. Yet there is at present nothing to take its place.

The A. L. M. formula is based on a maximum of 1000 feet of piston speed per minute and is accurate for the cheaper cars that develop that rate of piston speed. But few of the moderate or high priced cars of today develop as little as 1000 feet. Some cars, for instance, develop 1800 feet of piston speed, nearly double the A. L. M. maximum, and has been shown by actual block test to develop regularly nearly 10 horsepower more than is given by the A. L. M. formula.

The old formula, moreover, takes no account of the general design of the car, although this design largely determines the actual horsepower delivered to the driving wheels. In an automobile the horsepower developed by the motor has to do a great deal of work in turning the cam shaft, driving the magneto, forcing the water to and from the radiator, pumping the oil, and in some machines also in driving the fan, pumping the gasoline, and so on. All this work consumes horsepower; in some cars it consumes a great deal of horsepower, perhaps even half of all that is developed. Of course the more consumed in this way the less remains to drive the car. A good automobile design economizes horsepower and a poor design wastes it.

In early days, when all automobile designs were about equally wasteful, the A. L. M. formula served very well as a basis for comparing the different makes. Of late, however, the difference in horsepower economy has become very marked, and the A. L. M. formula, even if it gave the motor power correctly, would no longer indicate even relatively the power delivered to the driving wheels.

Will Be No Strike. The Western Federation of Miners has defeated a proposition recently made to call a general strike on the day set for the opening of the trial of the McNamara brothers. The vote was 175 against to 124 in favor of the general strike.

A Chicago hotel steward has invented a machine which can wash and dry more than 18,000 dishes an hour when operated by two men.

How Drink Put a Crimp in Success

Neal Treatment Puts an End to Desire for Drink in Three Days.

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