

SCHOOL GARDEN WORK PLANNED

Bureau of Education Expects to Enlist Many More Children This Year.

DID GREAT WORK IN 1918

Profit Averaged \$10 for Each of the 1,680,000 Garden Soldiers Engaged—To Enlist 4,000,000 in Work This Year.

By LESTER S. IVINS.

Regional Director for Central States.

Washington—The United States school garden army, organized at the request of President Wilson to stimulate food production among the children of the country, as well as to give them an opportunity to utilize their spare time in a pleasant and profitable manner, enlisted 1,680,000 garden soldiers in the United States during the year 1918. This number represents the boys and girls in cities, towns and villages who actually planted, cultivated and harvested crops at their homes or on grounds under school supervision. Many more than this number started, but only those pupils who did the work satisfactorily were granted the government U. S. S. G. insignia as a recognition of their work.

The average profit was a little more than \$10 per pupil, or \$18,900,000 for the entire army. This amount represents both the fresh and canned goods used and sold. The average amount of food canned was one dozen pint cans per pupil.

This profit was produced on land which would not otherwise have been used and by children in many cases who would not have been otherwise employed. This food was in most cases consumed while fresh, where produced, without cost of transportation or handling and without deterioration on the market. Considering these facts, the real results are of greater value than the figures would indicate.

More Gardens This Year.

Reports from more than one-half of the towns and cities that were not organized under the federal plan in 1918 indicate they will be a part of the United States garden army in 1919.

Many cities and towns had gardens, but the superintendents of schools for various reasons did not have the children to organize along the lines of the federal garden army plan. However, it should be added that these communities did a great amount of work toward increasing food production in their localities.

The garden work is one of the first educational movements in the state and nation that has been enthusiastically supported by school authorities in public, parochial and private schools. All these school systems joined in many localities and employed the same garden supervisor and garden teachers.

The garden division of the bureau of education was greatly increased last September by the employment of assistant regional directors for all the

states and some special state representatives for the state council of defense in many of the states. These additional helpers make it possible to do more intensive work.

The increased number of administrative federal and state directors will be very materially aided by the special garden supervisors that are to be selected in all of the principal cities and towns of the country.

Learn Valuable Lessons.

Educational leaders representing systems that were most successful last year with the garden work learned many valuable lessons. They find that children are much more interested in getting seed if these seeds are to be planted in gardens of their own; that all school work was of greater interest when it could be related to home experience; money made as the result of garden work provided funds for stamps, books, saving accounts, necessities of life, Red Cross and other such drives; children had greater appreciation of food after having had

experience in its production and preservation; parents became interested while working with the children, who never before attempted the production of garden crops; that in addition to the health, civic and educational values, children were taught valuable lessons in thrift, industry, patriotism and responsibility.

Judging from past experience it is only a question of time when the cities and towns in America will have full courses in gardening in their schools as has been the case in the old world for many years.

School officials throughout the country, in order to aid the nation in fulfilling its guarantee of 20,000,000 tons of food for Europe in 1919, and in order to give the children under their charge this newer type of education are aiming to make a readjustment in their programs. They will use garden books as a part of the supplementary reading, and will change nature study, elementary and general science courses to garden courses. Such a plan or some other shifts that will provide a place for garden work in the school, as well as actual production at home, will once again convince the public in general that the schools will be just as able to aid in reconstruction as they were in winning the war.

EBERT TROOPS FIGHTING THE REDS



German government troops stationed upon the roof of a shack, armed with light machine guns, are shown protecting a government building in Berlin against the Spartacists.

BELGIUM'S RAIL DAMAGE BILLION

Commission Puts This Estimate on Destruction of Lines and Bridges.

FOE DESTROYED 690 MILES

Seventy Per Cent of Damage Was Done in 1918—French Coal Region Lost Fifteen Billions and Repairs to Take Ten Years.

Paris—The Belgian commission which is investigating the damage done by the Germans to railroads in occupied territory, while it has not yet finished its work, is in a position to give interesting figures relative to destruction caused by the Germans.

The figures show that nearly 690 miles of railroad tracks were destroyed completely and nearly 290 miles virtually destroyed and rendered useless out of a total mileage of approximately 2,900 in Belgium.

Done Mostly in 1918.

These destructions mostly were in the Mos coal valley, in the region of Tournai and around Ghent, Bruges, Ostend and Courtrai and 70 per cent of the destruction was carried out during the period from the start of the Belgian offensive on September 28, 1918, and the signing of the armistice.

The Germans appropriated 2,611 locomotives out of a total of 4,234, or about 57 per cent; 4,932 passenger cars out of a total of 10,812, or 45 per cent, and 89,528 freight cars out of a total of 94,737, or 94 per cent. The block signal system in Belgium was destroyed and replaced by a German system, with which the Belgian locomotive engineers are not acquainted. It will have to be removed and the Belgian system again installed. The commission is not able to make public yet the number of bridges or stations destroyed.

All the bridges leading in and out of Ostend and Bruges have been destroyed and virtually all in West Flanders, as well as those over the Meuse at Liege, Namur, Huy, Dinant and Anserme. Eight bridges over the Ghent-Terneuzen canal were blown up. Two of these bridges at Balzaete, near the Dutch frontier, weighed 3,000,000 pounds each. It is estimated by the commission that more than 100,000,000 pounds of steel will be required to rebuild the bridges in Flanders alone.

The commission estimates the damage to railroad material, tracks, bridges and other equipment at more than \$1,000,000,000.

France is faced with a most formidable

task in reconstructing the important coal and industrial districts of the department of the Nord and the Pas de Calais, and it will cost \$5,000,000,000 francs (\$15,000,000,000), according to a statement made to the French senate by Louis Loucheur, minister of industrial reconstruction. The Germans completely destroyed 101 coal pits, and Mr. Loucheur said he hoped that if the French had luck and worked very hard they might be able to produce 34,000 tons daily by the end of 1919, instead of 75,000 tons, the output before the war. The repair of the mines will cost more than 2,000,000,000 francs (\$60,000,000) and cannot be accomplished in less than ten years.

The factories in the district have no raw material and the machinery has been destroyed or carried away. Mr. Loucheur said it would take several years and 40,000 freight cars to bring back the machinery taken to Germany.

TO KILL DRUNKEN OFFICIALS

Bolshevik Government in Russia Decries Draconic Punishment for Inebriates.

Stockholm—A threat to punish inebriety among bolshevik officials of high degree by death is contained in a soviet decree printed in late issues of the Petrograd newspapers.

The decree points out that drunkenness among such officials is increasing and proposes curative measures. If there do not prove effective, however, the offense, it is threatened, will cause the infliction of the death penalty.

Cigaret Clash at Vassar Is Solved

New York—An armistice has been signed between smokers and nonsmokers at Vassar college. The matter was thrashed out a few days ago and a decision was reached which now prohibits smoking by the girls in dormitories, but they can smoke elsewhere.

Consequently the girls avoid themselves of many secluded nooks. Probably the most patronized is Sunset hill. Here the girls are wont to gather and puff at their cigarettes, un molested by the trustees or the warden, Miss J. C. Palmer.

Vassar college is said to be the only woman's college which has heretofore recognized that girls smoked.

YANK INGENUITY LANDS U. S. AT TOP OF WORLD'S NAVIES

Revelations in London Show Hitherto Undisclosed Part of America in War.

OPENS EYES OF NAVY MEN

In the New Mexico Gives World a Successful Revolution in the Propulsion of the Biggest Fighting Ships—Naval Science Advanced.

London—Joseph Daniels, secretary of the navy congratulated Admiral Griffin and W. L. R. Emmett upon having given the world, in the New Mexico, a "successful revolution in the propulsion of the biggest fighting ships," adding: "As so often before, American ingenuity and inventive skill now lead the world in the propelling of battleships." He seems to have been unaware that in this case the "ingenuity and inventive skill" originated in England. Otherwise, one may be sure, he would have been the first to give credit where credit was due.

At the same time it must be admitted that American enterprise and foresight to the possibilities of a really useful invention have opened the eyes of the naval authorities on this side, to the great and far-reaching importance of what, from insufficient investigation and wrong expert advice, they had discarded.

The history of the evolution and perfection of what is known over here as the "Paragon" thermo-electric ship propulsion system, and as is used in the New Mexico, the importance of whose successful trials, though announced by Mr. Daniels early last December, has just been discovered by the English press, is interesting.

This Makes the Big Idea Plain.

Although previous lectures on the subject were heard at the Franco-British exhibition in London as far back as 1906, as regards its application to the merchant marine, it is just ten years ago that William P. Durnall, a prominent member of the Institute of Marine Engineers, London, now a staff captain in the technical side of the royal air force, stationed in London, and the inventor and patentee in many countries of the "Paragon" system, interested a favored audience of naval and marine engineers at Chatham by lecturing on the possibilities of polyphase alternating current electrical power transmission for main marine propulsion and speed regulation.

He described how he had then got the "Paragon" system so complete that by a simple method an electrical speed reduction gear was formed and any "ahead" or "astern" speed from zero to maximum could then be given to the propellers with the turbines running at all times in one direction, and at constant revolution speed, at the same time demonstrating that with this advanced system a fuel saving of no less than 25 per cent could be secured over the latest type battleship, namely, the then new and original "dreadnaught."

Here is the Inventor's Answer.

In a copy of the lecture which I got Captain Durnall to examine for me, he said:

"By the adoption of this polyphase alternating current induction electric motor it is possible to do what is not possible to do with any other kind of motor of equal power and revolution speed; that is, to make them sufficiently small in diameter that they will go into the narrow atticles of warships, and at the same time to ob-

tain the maximum of efficiency at the least possible cost.

"The heating losses of this type of motor are reduced to a minimum amount, and require comparatively little attention; it is also quite light 'A weight per horse power given off, and has become very popular on shore of recent years, mainly owing to its powerful starting torque and its freedom from commutators and brush-gear.

"A burnt-out armature—the perpetual source of dread to other types of electric motor in practice—is practically unknown in this type, even when put to such severe service as propeller reversing. Indeed, its depreciation under proper conditions for which it would be designed is as low as any other type of revolving mechanical machinery, and owing to its peculiar running character it is especially suitable for main marine propulsion work on battleships, and especially as this efficient electric motor can be designed for large powers, while its constructional details represent the very acme of simplicity."

Halts Her Tendency to Race.

A feature which the captain also noted, and laid much stress upon, was the fact that it was impossible for this type of motor to "race" when the vessel was under heavy rolling or pitching conditions, and thus allowing the vessel to run at high speed even in a severe sea and heavy seas, while the load balanced itself automatically between heavily and lightly immersed propellers, while under those operating conditions and without straining the ship as is the case in every other type of propeller drive, and he estimated a great saving in fuel in connection with the propulsion of such warships when propelled under heavy weather conditions, and so noted in the case of the New Mexico.

Captain Durnall added that the subject was then receiving close attention on the part of shipbuilders and engineers, forming the topic of repeated discussions of various engineering associations, both in England and abroad. "Electrical power transmission for ship propulsion," he said, "was high at hand," and he urged naval and mercantile engineers to make themselves an fait with all the potentialities of this "twentieth century" invasion of the orthodox methods of steam propulsion on a direct propeller drive.

"That, be it remembered, was ten years ago, and the matter did attract a considerable amount of favorable comment, but that was about as far as it went.

How Captain Durnall Won His Point.

One of Captain Durnall's chief critics was Sir Charles Parsons, who said he feared the system would prove a source of grave danger to the engine room crews, as "if a short circuit occurred they would all be poisoned by copper poisoning from the fumes that would be given off." And yet within a year Sir Charles Parsons' firm, together with the Thompson Houston Electric company (the English representatives of the General Electric company, U. S. A.), were both defendants in actions brought by Captain Durnall before the comptroller general of patents, in London, in which they sought to infringe Captain Durnall's patents, the settlement of which was brought about by Captain Durnall agreeing that he would be satisfied if a disclaimer as to this polyphase alternating current ship propulsion was inserted in the applicants' specifications.

Since that time several successful patent actions have been placed to the credit of Captain Durnall, whose original invention is considered basic.

But the real reason why Captain Durnall's invention was thrown down,

ACE DESIGNS STATUE



Western Newspaper Union

Lieut. Walter Chalmers, who recently returned from the front, is an ace, having brought back the Hun machines, designed this statue of General Pershing and an American doughboy, which will be made in bronze by Miss Belle Kinney, a young sculptress of New York, and presented to General Pershing. Lieutenant Chalmers is a former newspaper man, and while in France was admitted to the bar as a full-fledged lawyer.

not once, but many times during the last ten years, by the British admiralty, he said, was because it was considered of too revolutionary a character. He is, however, very gratified at the tremendous success of his Paragon system, first on the naval cutter Jupiter and more recently on the New Mexico.

Whether it was, as can hardly be gainsaid, that inventors are seldom the best missionaries of their own cases, or that the adverse criticism of such authorities as Sir Charles Parsons and Docteur Ferranti carry very great weight in marine engineering circles over here, Captain Durnall is very gratified that at last his efforts have been rewarded by the recognition in highest possible form, namely, successful trials at sea, of his Paragon system by the United States navy; although, in discussing the matter with me, he rather diffidently criticized one remark which Mr. Daniels is reported to have made to the effect that the New Mexico is a much more "powerful" ship than any other in the world.

Naval Science Advanced.

"What Mr. Daniels undoubtedly meant," said Captain Durnall, "was of course, that he had built a 'much stronger' ship, one which will stand heavier gunfire and under-water attack than any other afloat, as by taking full advantage of the facilities of elasticity and the flexibility of post-plant placing, which electrical driving offers, full advantage can and has been taken of the efficient merits of the strength of the 'cellular' system of hull construction, and armor, points which the world has yet to learn in connection with the splendid high power, high speed electrical battle cruisers under construction for the progressive United States navy, of which every true American should be highly proud, not only in those facts, but also that they have such advanced thinking men among their naval engineers, and administrative officers so well represented in Mr. Daniels, who has rightly given fine support to the art of thermo-electrical warship construction.

"Be that as it may, however," added Captain Durnall, "the facts are today, and as an engineer of 20 years' experience, I have no hesitation in stating that in my opinion the American naval engineers have advanced the world's naval engineering constructional art by at least 25 years, by adopting this modern advanced engineering system for their consequently efficient warships, as apart from its unique engineering value, it opens up a vista of vast commercial and political significance, which has yet to be felt the world over."

WROTE HER OWN OBITUARY

Aged Spinster Prepared All but Date Four Years Ago and Left It With Undertakers.

New York—Miss Anna M. Haley, who died at 31 Roseville avenue, Newark, wrote her own obituary four years ago and left it in care of a firm of undertakers.

She asked that it be used just as she wrote it, with the date of her death filled in. Here is part of her obituary:

"Miss Haley has been a great sufferer from spinal trouble for many years, and with her brother traveled extensively for health. In the year 1879-1880 they traveled around the world via California, visiting the Sandwich Islands, Australia, southern India, Egypt and Europe.

"Miss Haley was born in the city of New York, as were her ancestors for many generations. She was educated in Miss Haines' school, Gramercy Park."

NEW BOUNDARIES FOR POLAND



Under the new terms of the armistice hostilities must cease in Posen, where the Germans have been opposing the advance of the Poles in their efforts to establish their claim to the entire territory of the German province.

The provisional boundary that the allied armistice commission follows: south of Schodzie, north of Exa, from Inowroclaw, south of Lubischin, Sann (?), North of Carminia, to the east of Bromberg, south of Bentechen (west of Posen), Waldau, west of Blinbaum and thence along the frontier between Silesia and Poland.

This takes in the greater part of Posen and only leaves out those portions along the border that have been thoroughly Germanized.

The heavy shaded portions of the map show the new territory in which the allies have backed up Polish sovereignty.