

MUNITIONS HISTORY BEING PREPARED

Stupendous Scope of American Projects Officially Told.

WAR SECRETS DISCLOSED

United States Plants Making Mustard Gas at Rate of 60 Tons Daily When Armistice Is Signed.

WASHINGTON, May 10.—An official narrative of the part American industry played in providing munitions for the American army in the great war is unfolded in a book being prepared under the direction of Assistant Secretary Crowell, of the war department, who was director of munitions up to the close of hostilities, when he was specially assigned by the president to direct the demobilization of material.

Advance pages of two sections of the book, those dealing with the chemical warfare material offensive and defensive, and with the equipment for the signal corps were made available today, telling for the first time officially and completely not only of the stupendous scope of the projects; but of the difficulties and delays encountered and of the patriotic support of the war programme given by American business generally.

The chemical warfare section tells of the original work done by the ordnance department toward obtaining toxic gases and anti-gas devices for the use of American troops. Subsequently this service became a separate branch of the army under the direction of Major-General W. L. Sibert.

Among other secrets disclosed is the basis of frequent statements that at the time of the signing of the armistice, the United States alone was producing gases for military use at a rate of 10 times in excess of the best production Germany could obtain. The Germans produced with all their facilities, about six tons of mustard gas per day, while the United States was producing more than 60 tons a day and employing methods of production far more modern and efficient than anything attained by the enemy.

Odor Gives Popular Name.

There were three plants at work on mustard gas, the Edgewood, Md. arsenal which was manufacturing 30 tons a day by November 11 and had turned out 711 tons up to that day; the plant at Hastings, N. Y., which was to have a capacity of 50 tons a day and was ready to operate on November 11 and the 50th plant of the National Aniline & Chemical company, at Buffalo, N. Y., which was 80 per cent complete.

The chemical name of this compound is dischloroethylsulfide and its popular name of mustard gas comes from its odor.

Another element of the programme was the production of tear gases, not deadly under ordinary circumstances, but designed to produce blindness, thus forcing the troops to use masks extensively, impairing their military efficiency. The foundation of these gases was produced far more modern which is obtained from subterranean solutions found chiefly in the vicinity of Midland, Mich., where the government financed the sinking of 17 brine wells under direction of the Dow Chemical company, which were prepared to supply 65,000 tons a year.

The other chief gases are the so-called "killers," the gases so deadly as to bring death unless safeguards are provided, chlorine and chlorpicrin and phosgene. The only one of these produced commercially in the United States was chlorine and even with that the supply was utterly inadequate to the demand.

Statistics Are Given.

A statistical table shows that 1453 tons of chlorpicrin, 420 tons of phosgene and 130 tons of mustard oil were actually shipped overseas from January to November, 1918, in 200,000 75-mm shells loaded with chlorpicrin and 150,000 loaded with mustard oil went abroad, the shipments including 24,000 phosphorus grenades as smoke bombs and 18,000 phosgene bombs for Livens mortars. The capacity for filling shells and bombs on the day of the armistice exceeded 4,800,000 a month. At that time the practice of shipping gases in bulk to be loaded into projectiles on the other side had been abandoned.

"We therefore shipped to Europe in bulk," the report states, "2623 tons of gas or its equivalent, which was largely loaded into shells and used by the United States troops or those of the allies. This quantity was sufficient to load 1,600,000 shells, two-thirds of them being of the 75-mm caliber and the other one-third 105-mm, the total number being thought to be at least equivalent to the total number of gas shells fired by American troops in action."

"Thus while American gas was not actually fired in American shells against the Germans, American gas was used against the enemy in American shells furnished at least as much as the fired."

In addition to this we shipped 18,600 Livens drums loaded with phosgene. These contained 279 tons of gas, and some of them were fired at the enemy."

A table of casualties at the Edgewood arsenal shows that while only four men lost their lives from gas at this plant, 225 were injured, the bulk of them, 674, in mustard gas accidents.

Defensive Side Taken Up.

Taking up the defensive side of gas warfare material, the report shows that the American troops had "the best and most protective gas masks the world

had seen; and they brought these with them by the millions." A total of 2,250,000 masks was produced, of which 6,000,000 were sent overseas and the report states that these masks "gave 20 times the protection afforded by the best German gas mask."

"No American soldier was ever gassed due to the failure of an American gas mask," the report says, "and such gas casualties as did occur were due to the fact that the masks were not quickly enough utilized when the gas was thrown over, or because the soldier was unaware of the presence of gas."

The original order from the department was for 25,000 masks to go with Pershing's first expedition and the report tells in detail of the frantic efforts necessary to procure them, efforts which actually counted for little since the masks were not used for many months. At the time the expedition sailed, however, the British and French were not thoroughly acquainted with the gas warfare than was developing, nor had completed effective protection been worked out. In speaking of the first German gas attack upon Canadian troops at Ypres, the report says chlorine was used and while protection of the troops from it later became an easy matter, "it was only lack of faith in their new weapons that prevented the Germans from winning the war with it then and there."

Development of Gas Masks.

"Had they brought into the fighting a sufficient supply of this chlorine," the report continues, "they might have gassed their way to Paris in short order. As it was, the brought into the line an almost negligible supply, and they themselves were insufficiently protected to go through their own gas and follow up the attack. By the time they were able to renew gas warfare the French and British had equipped themselves with masks which were sufficient to protect men against chlorine."

The report tells of the development of gas masks from the original pads soaked in chemicals to the "box respirator" which came into general use. The Americans and British employed a double protection mask, the face piece being gas-tight, but, to insure against leaks, a mouthpiece and nose clip being supplied also, insuring protection even in a torn mask. The first order was for 1,160,000 of these masks for the American forces.

Subsequently, to provide greater comfort for the men, it was decided abroad that a single protection mask would be sufficient, the risk of leaky masks being regarded as preferable to the discomfort of the double protection mask. Whether this decision was received, however, on this side, it was decided to carry forward experiments with new types of masks which would give both comfort and security. This was carried forward to a point where a squad of 150 men in the field testing sectionalized their masks in their gas warfare, playing baseball, digging trenches, fighting sham battles day and night in which actual gas grenades were employed and exposing themselves to the heaviest concentrations of the deadly gases under all conditions.

Successful Masks Tested.

"The work of this section," the report says, "even went so far in the case of the later designs as to include a test where six men worked, played and slept in the mask for an entire week, only taking them off for 30 minutes at each meal time, and each day entering high concentrations of the most deadly gases without injury to the wearers."

The chief ingredient of the protection against gases is carbon, which absorbs the gas instantaneously. Coconut shells formed the best supply of carbon that could be found and the known world was raked by American representatives to secure what was needed. In addition enormous quantities of fruit pits and other nut shells were secured and the national campaign to increase the supply of these ingredients met with great success. The slogan, "Eat More Coconut," the report states, "increased the consumption in the country more than 100 per cent in a very brief period and in October, 1918, the government was obtaining from all sources about 150 tons per day of coconut shells. The fruit canneries of the Pacific coast supplied 100 tons a day in fruit pits, and carry pits and walnut shells and the campaign led by the American Red Cross to induce the public to contribute fruit pits and nut shells was in full swing when the armistice was signed. It is estimated that 4000 tons of materials was collected by this means."

Among the masks designed and produced were 27,581 horse masks, which were easier to manufacture, as a horse breathes always through his nose and is not as liable to gas poisoning as man. Other defensive equipment produced in large amounts included dug-out blankets, gas-proof doors of underground shelters from gas, and oiled clothing, underclothing and gloves to protect from mustard oil. There were also 45,906 special signal horns to give warning of gas and more than 50,000 fans to blow the vapor out of trenches and dugouts.

MOVIE GRAFT IS CHARGED

Several Managers in New York Named in Indictment.

Showing the wide spread of the net whereby Dr. William F. Doyle, head of the bureau of fire prevention, is charged with collecting illegal fees from moving picture houses, it was learned the other day that the managers of theaters in all corners of Manhattan island are named in the indictment of Dr. Doyle and his three alleged co-workers as having "subscribed" to the Colonial Film Exchange, from which they never got any film. Among these managers are Samuel Block of the Heights theater on Wadsworth avenue, Maurice Needles, interested in a string of east side houses; Adolph Comstock, connected with a house in the far east Seavents, and Grant Anson of the Comet theater on lower Third avenue.

Anson says when he first subscribed to the exchange he thought it was a bona fide business proposition. The managers of the other houses could not be reached.

Abraham Levy, attorney for Dr. Doyle, notified Acting District Attorney Fred Talley that he would apply to Judge Rosalsky for an order permitting him to inspect the grand jury minutes when which the indictment was found. Mr. Levy alleges that much of the grand jury evidence was illegal.

BOY IN PRISON VERY ILL

Paul Chapman, Singer, Gets Diphtheria at Sing Sing.

NEW YORK.—Thirty-five newly arrived prisoners from New York, Kings, Nassau and Orange counties were moved from Sing Sing to Clinton prison at Dannemora the other day on account of the diphtheria quarantine at Sing Sing.

They stopped at the prison office only long enough to have their pedigrees taken. They were several hours longer than usual on the railroad owing to the snowdrifts up-state.

Paul Chapman, the youthful choir boy of Brooklyn whom Governor Whitman saved from being executed for killing Harry Regensburg, a clerk, in a Brooklyn cigar store hold-up, is in the prison hospital suffering with diphtheria. There have been about 75 cases thus far.

PLAINTIFF ATTEMPTS BOLT

Foreigner Unwilling to Court Proceedure Loses Temper.

KANSAS CITY, Mo.—John Gorman, a foreigner and plaintiff in divorce pro-

For Sore and Bleeding Gums

Use Pebecco—not with a tooth brush until your gums are better and your teeth more firmly held. Simply apply Pebecco Tooth Paste with your fingertip to gums and teeth, massaging gums gently. And see a dentist.

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When your gums are well again, brush your teeth with Pebecco twice daily, brushing up and down. Pebecco also helps ward off "Acid-Mouth," the worst destroyer of teeth.

Pebecco is sold everywhere. If you haven't tried it, isn't this a good time to do so? It keeps good teeth good. Its use is a daily pleasure.

Buy W. S. S.



Sold by druggists everywhere

Big Fruit Merger Coming

Citrus and Apple Growers Plan \$100,000,000 Combine.

LOS ANGELES.—A citrus grove and apple orchard merger, to be known as the American Fruit Growers, said by its sponsors to involve property worth \$100,000,000 in the United States, and \$20,000,000 in California alone, is announced by J. S. Crutchfield of Pittsburg, Pa., Crutchfield is president of the Cantaloupe Shippers' association, active in the Northwest fruit exchange, and said to be the largest individual grower of apples in the United States.

The plan, Crutchfield said, is to merge citrus interests of California and Florida and apple in the various sections, to remove the hazards associated with the fruit business by neutralizing the losses of any given district in an off year by pooling the profits of the entire territory covered by the merger.

MOURNER WINS SIX CENTS

Father's Feelings Hurt at Daughter's Funeral.

NEW YORK.—Six cents damages was awarded James Hewitt of Bayonne in consideration of mental injury received at the hands of John H. Eldridge, an undertaker of Woodhaven, L. I., by a jury in the Queens county court.

Where Can I Find Relief From Itching, Terrifying Eczema?

This Question Is Ever on the Lips of the Afflicted.

Eczema, tetter, erysipelas and other terrifying conditions of the skin are deep-seated blood diseases, and applications of salves, lotions and washes can only afford temporary relief without reaching the real seat of the trouble. But just because local treatment has done you no good, there is no reason to despair. You simply have not sought the proper treatment that is within your reach.

You have the experience of others who have suffered as you have to guide you to a prompt riddance of blood and skin diseases. No matter how terrifying the irritation, no matter how unbearable the itching and burning of the skin, S. S. S. will promptly reach the seat of the trouble and forever rout from the blood every trace of the disease, just as it has for others who have suffered as you have. This grand blood remedy has been used for more than fifty years, and you have only to give it a fair trial to be restored to perfect health.

Our chief medical adviser is an authority on blood and skin disorders, and he will take pleasure in giving you such advice as your individual case may need, absolutely without cost. Write today, describing your case, to Medical Department, Swift Specific Company, 252 Swift Laboratory, Atlanta, Ga.—Adv.

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not only move the bowels, but also improve the appetite and strengthen the digestion.

ter how unbearable the itching and burning of the skin, S. S. S. will promptly reach the seat of the trouble and forever rout from the blood every trace of the disease, just as it has for others who have suffered as you have. This grand blood remedy has been used for more than fifty years, and you have only to give it a fair trial to be restored to perfect health.

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LIFE IN ARMY FORTY YEARS

Trainmaster at Fort George Wright Begun at 12 Years.

SPOKANE, Wash.—Forty years of service in the United States army out of the 52 years of his life is the record of William R. Hager, trainmaster at Fort George Wright, near here. Except for a short time in Cuba in 1898, and a brief stay on the Mexican border in 1918, Mr. Hager has spent his entire service with the army in the northwest, participating in the subjugation of marauding Indian bands much of that time.

He became a herd boy for the army at the age of 12. His father was a freighter at Fort Coeur d'Alene, after wards known as Fort Sherman, near the present site of Coeur d'Alene, Idaho. His job was to herd captured Indian ponies near the fort. Later he became a freighter and packer for the army, carrying supplies to the fort or to detached forces fighting the Indians. When Fort Sherman was abandoned in 1900, Mr. Hager was transferred to Fort George Wright, which has been his station ever since.

Eight-Hour Day Derided

Dr. Elliot Says General Application of Rule Is Absurd.

BOSTON, Mass.—Charles W. Elliot, president emeritus of Harvard university, told a legislative committee that it was "inexpedient, not to say absurd, to attempt to fix by law the same number of hours of labor in each industry, or for all establishments in any industry." He urged that employers and employees should abandon suspicion of one another and agree on a common plan of action.

When George S. Ladd, postmaster of the state senate, was asked whether farmers were in favor of an eight-hour day, he replied: "No; God Almighty has made farming so that it cannot be put on an eight-hour basis. Cows and their milk cannot be so controlled."

The speakers appeared at a hearing of the Massachusetts Industries Commission.

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Below Your Equator

there is, in the form of the intestinal canal, a wonderful laboratory, within which are manufactured the very materials which are vitally necessary to sustain life, and also violent poisons which directly and indirectly cause disease and death.

Food waste, if allowed to accumulate, stagnates and gives rise to poisonous matter. This, if allowed to be absorbed into the blood, produces 90% of the disease that attacks mankind, from a transient neuralgia to a permanent hardening of the arteries.

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Nor is it safe or sufficient to take castor oil, pills, salts, mineral waters, etc., in the effort to force the bowels to move. Not only will the constipation grow worse with the continuance of such remedies, but the dose must be constantly increased with an ever-weakening effect.

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sprinkle one or two Allen's Foot-Powder in the foot bath and rub the feet. It takes the sting out of Corns and Bunions and soothes itching feet. For lasting comfort, shake Allen's Foot-Powder into your shoes. It takes the friction from the shoe, rests the feet, and makes walking a delight. Always use it for dancing parties and to treat in new shoes. All dealers well known.