

OUR DEFENSE

Big Guns

In battle the Field Artillery fires its accurate and powerful weapons in support of the main fighting arms, the Infantry and Cavalry. The standbys of the new artillery regiments will be thirty-six new 75 mm. guns and sixteen 155 mm. guns. The 75 huris 166 three-inch shells an hour, each weighing about 15 pounds. And the artilleryman, when he has his mind on his business, can nestle one of those shells right into the enemy's lap at a distance of seven miles.

If that doesn't seem to do the job, the artilleryman unlimbers the 155 mm. howitzer gun, just twice as big. Then he is prepared to land a 100-pound shell in the enemies' bread basket 10 miles away. An artillery regiment is also supplied with a collection of in-between-size guns for special jobs. All these guns can use shells that whistle, sing, buzz, or whisper on their way to deliver various loads of high explosive, of shrapnel, smoke, gas, or whatever the enemy would least like to have at the moment.

Problems In Gun Production.

Production of these guns is no simple task. In order to stand up under the terrific pounding of rapid fire they must be made of the finest steels available. To be accurate the gun barrels must be shaved down on lathes to within fractions of a thousandth of an inch. The recoil mechanisms must be built like a watch, but rugged as a battleship, for they must catch the bump delivered by several hundred thousand foot-pounds of exploding charge, yet return the gun to position in a fraction of a minute.

In the main, these guns, their recoil mechanisms, and their carriages are built in Government arsenals scattered around the country. These plants are equipped with the necessary special tools, and have the men experienced in manufacture. The job of the National Defense Advisory Commission in this phase of the work is to see that the arsenals get the metals they need when they need them, and to see that properly trained personnel is available for expanding the working force.

Edward R. Stettinius, Jr., in charge of raw materials from the source to the factory, has already determined that there are adequate supplies of all necessary steel ready for use when needed as the program progresses.

To insure an expanded supply of manpower the Commission has cooperated on setting up a youth-training program. Under this program, thousands of young men and women throughout the country are attending trade schools this summer, learning the techniques of operating modern machine tools so that they will be ready to step into place on the production lines set up throughout the nation.

Productive Coordination Necessary

Although the Government has arsenals that turn out shells for the artillery, the vastly expanded army will use far more than they can supply. To take care of expansion, the Army has long had a policy of giving "educational orders." Under these orders, a manufacturing plant usually devoted to sewing machines, tools up a production line for making 75mm high-explosive shell cases. A few hundred shells are produced in a few days. The production line is shut down, but the tools all remain in the factory ready to go to work. These have now been called into action, but that is not enough. New plants are to go into operation west of the Alleghenys, handy to supplies of raw materials, along the lines of transportation, and where there is already a supply of surplus labor available. As these plants expand their activities a steady supply of materials must reach them, be processed, and flow smoothly along to the shell-loading plants, out the other end, and on to the man who feeds them into the gun.

This calls for tight coordination all along the line, not for today or tomorrow, but looking ahead into next year, so that every time that Joe Smith of Battery X, Field Artillery, reaches for a shell he will find one of the right kind, ready to be stuffed into his gun. That means an unbroken, unclogged smooth flowing production line running from the gun back through the plants to the iron and coal mines. And that is the job of the Defense Advisory Commission.

Feeding the Artillery.

Since the men at the guns almost never see their targets, the control of field artillery is conducted from observation posts connected with the batteries by radio or telephone. At the posts, rapid computations are made for aiming the gun, and fire is adjusted to hit enemy targets. In

order to see that the shells have the proper name and address of the enemy requires uncannily accurate fire-control instruments. This was a troublesome product in the last war. We just didn't have the supplies of optical glass for range finders and similar instruments. The Defense Advisory Commission has already found that new sources in the United States, with increased plant capacity already under way, will give an adequate supply.

Joe Smith, Artilleryman, unlike his brother John in the Infantry, ordinarily does not fight as an individual, nor is his gun fired as a single unit. To make fire effective against moving men or columns, the guns are employed in groups. Over 100 men serve a battery of four guns, firing as a unit and covering a considerable area with a single burst of shells. If the observation post or the battalion fire direction center has done its job of locating the enemy, the burst does the rest. Three batteries of light artillery make up a battalion with almost 500 men, battalions of heavy guns being made up of two batteries. And a regiment with upwards of 1,000 men consists of two or three battalions depending again on the size of the guns. The new Infantry divisions will have two artillery regiments, one light and one heavy, 60-odd guns in all. And on top of the heap over the artillery general, we find the division commander who runs the whole show, artillery and infantry.

Now, in order to keep up with the infantry who are going places in trucks and tanks, the artillery has to be mobile also. It keeps up with horses, trucks, crawlers, and creepers. But that's only the beginning of the problem. For a 75 mm. gun firing at a normal rate during a three-hour battle slaps out some 500 shells, weighing over five tons. So to keep the wherewithal handy requires a large truck train. That's easy. Trucks are an item this nation really knows how to produce.

Ain't Gonna Pick Cotton

Found: the man who wants nothing but the gravy, and makes no bones about his wants.

The subject walked into the Wayne welfare office recently, marched up to the desk of Supt. J. A. Best and said:

"I want to get on WPA."

Knowing the subject both personally and by reputation, the superintendent asked:

"Do you want WPA or do you want a private job?"

"I want WPA," was the reply.

"Well, WPA's full," the welfare head said. But I'll write you a letter to UCC folks who will assign you to a cotton picking job."

Initialing the finished letter, Superintendent Best presented it to his caller who calmly and promptly tore it to shreds, right under the superintendent's nose. Turning his back the subject mumbled as he walked out: "Darned if I'm gonna pick any cotton."

Teacher: "What does it mean when the paper says a man went to the convention as a delegate-at-large?"

Bright Boy: "It means that his wife didn't go with him."

★ FASHION PREVIEW ★



Ideal for the college girl is this paddock-plaid tweed coat, as shown in the September Good Housekeeping. Note the simplicity of the cut. The colors are a mixture of tomato red, sage green, and beige.

N. C. State Fair Will Show Burning of City

RALEIGH, Sept. 18.—A sweeping river of lava flowing from a giant volcano erupting to destroy a huge city will be depicted in the fireworks display, entitle "The Earthquake", to be presented nightly at the State Fair at Raleigh, October 8 through 12, manager J. S. Dorton, announced today.

The fireworks display will be seen following the grandstand performances, which include nine thrilling acts and a colorful revue presented under the direction of George Hamid of New York City.

"The Earthquake" setting will be 200 feet long and 30 feet high, and in addition special set-prices from three sections of the field will be seen in three-ring circus fashion with hundreds of bombshells being fired continuously from the start of the display to the grand finale.

One of the most spectacular scenes of the display will be the destruction of a city, sound effects and the rumbling of the lava stream being furnished with the firing of huge bombs from the field.

The fireworks for the 1940 exposi-

tion will be presented by Tony Vitale of New Castle, Pa., who last year offered "The Men From Mars".

"Based on the compliments we have had in connection with the 'Men From Mars' presentation last year, we are again offering a production on Tony Vitale for we believe his displays will be in keeping with the usual entertainment program this year," Dr. Dorton said.

LITTLE THINGS

It takes so little to make us glad, to cheer us up, to make us happy; it takes and costs so little to be kind, to be thoughtful, to be considerate; it takes so little to cheer others up who are discouraged, so little to lend a helping hand, yet it means so much to others as well as ourselves.

We think too much about doing things that look big in our lives and we think too little of the everyday small acts of thoughtfulness, of kindness, the little helpfulness to those who are disheartened and down and out. After all, is it not the little things that make up life?

Rail oddities



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