

Schools AT WAR

A REPORT TO THE NATION



Independence Hall
PHILADELPHIA
1776

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DEPARTMENT, THE U. S. OFFICE OF EDUCATION AND ITS WARTIME COMMISSION



SCHOOL Wulsey

ADDRESS Holdenville Oklahoma

STREET

TOWN

STATE

Holden-
ville
3015

WE REPORT TO THE NATION

We herewith submit a bird's-eye view report of our
SCHOOLS AT WAR Program. It includes factual and pictorial
accounts of our War Savings Program and other outstanding
war activities. It is tangible proof of the resourcefulness, skills,
activities and the will to win of every student, teacher and
parent enlisted in our SCHOOLS AT WAR Program.

★ ★ ★ ★ ★ ★ ★ ★ ★

Name of School Hulsay

Address Holdenville Okla

Enrollment _____ Grades 1 - 8

No. of Teachers 2 No. of Classrooms _____

Size of Community _____

Cash Value of War Stamps and Bonds sold during SCHOOLS AT
WAR Program \$2.50 per Month

Hulsey

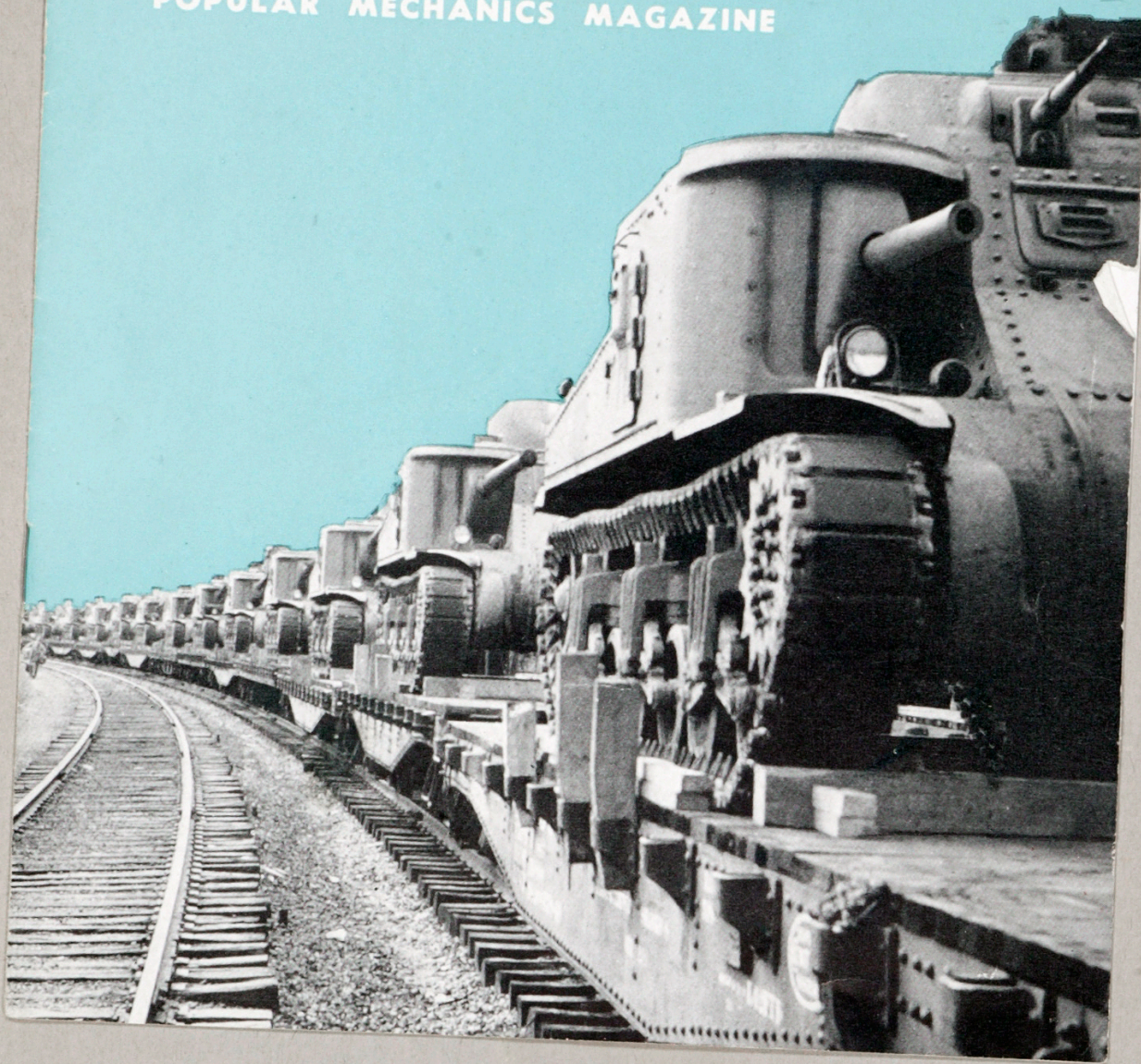
School

Hughes

Co.

The
IRON HORSE
Delivers the
TOOLS of WAR

Reprinted From
POPULAR MECHANICS MAGAZINE



Hulsey
2435 Lb.

Acknowledgment

We wish to express our appreciation for permission to reproduce this story, which was originally published in the July and August, 1942, issues of

**POPULAR
MECHANICS**
MAGAZINE

Printed and Distributed by the
ASSOCIATION OF AMERICAN RAILROADS
924 Transportation Building
Washington, D. C.

(ADDITIONAL COPIES AVAILABLE ON REQUEST)

The IRON HORSE *Delivers the* TOOLS of WAR



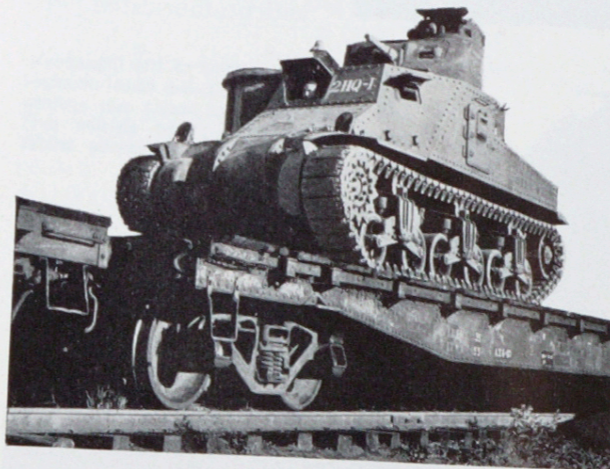
Troops boarding a special train. They travel in sleepers; "impedimenta" and field kitchens in baggage cars

PART I

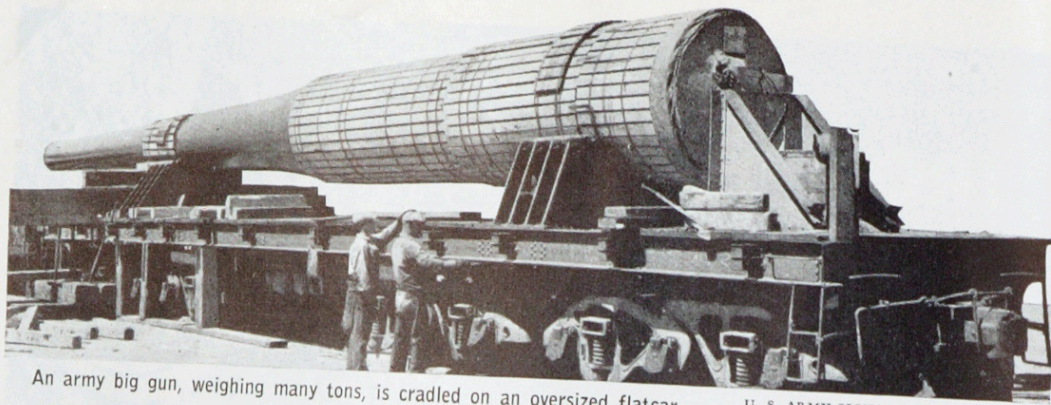
SUREST sign of an impending blitz in Europe is the public notice that passenger traffic on German or Italian railways is suspended or curtailed for the next few days. You can read between the lines—troops and supplies are on the move!

There's no such barometer to read in the United States. Unless you were halted at a grade crossing and saw the long strings of flatcars laden with tanks and big guns pass by, or unless you caught a glimpse of the khaki uniforms at every window of the special train flashing westward, you could only guess that America was starting its own big blitz in the days after December 7.

But it is no longer a secret that the greatest mass movement of troops and impedimenta and machines of war began within hours after the bombing of Pearl Harbor; that 600,000 soldiers and sailors and marines and airmen traveled across the states by railway in the first seven weeks of war with no more interference with regularly scheduled trains than an occasional sidetracking of your Midnight Express to let an army special race through. In round numbers that means that



Its crew peering from portholes, a tank crawls from car to car



An army big gun, weighing many tons, is cradled on an oversized flatcar

U. S. ARMY SIGNAL CORPS PHOTO



for 49 days, 30 trainloads a day of fighting Yanks moved from camps to bases; and the massing of forces still goes on. Nor does this include the vast number of military freight trains rolling across the land. Full trainloads of bomber and fighter planes, knocked down for shipment but ready for quick assembly, steamed westward from aircraft plants and warehouses of the middle west a day after war broke. As one example of the swiftness of mobilization, within 24 hours of Pearl Harbor a 38-car train laden with prefabricated, port-



"Allegheny" type engine of the Chesapeake & Ohio, with unique 2-6-6-6 wheel arrangement, hauls heavy coal trains over eastern mountains. Below, armored division puts aboard a trainload of track-laying trucks

able airport runways passed through Chicago on its way to an untold front.

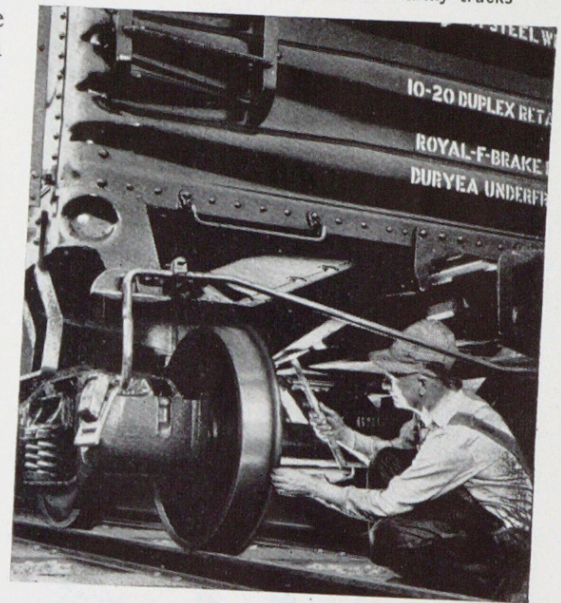
Some of these war freights string out more than a mile from cow-catcher to caboose. When they start rolling, everything else steps out of the way. A regular train arriving in a big classification yard at such a shipping center as Chicago or St. Louis may spend two to eight hours being broken up and remade into new



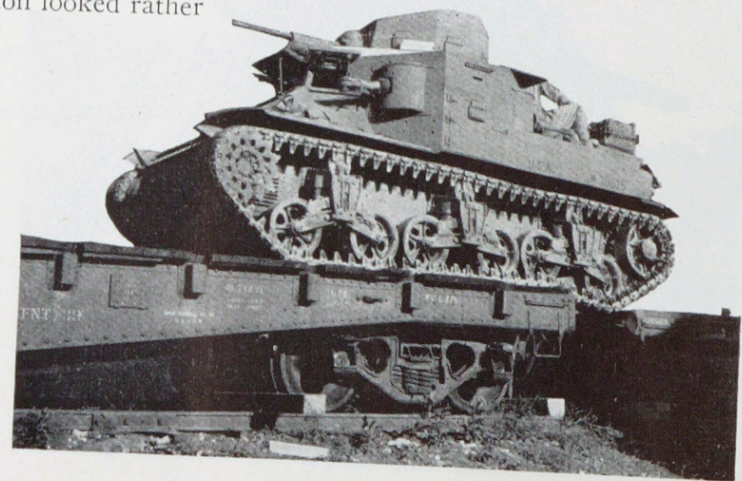
The railroads supply end-loading box cars to accommodate army trucks

trains; the military freight will skirt the city, pause only long enough to pick up a fresh engine and crew, and be on its way. At the end of its journey the cars are unloaded as rapidly as men and machines and warehouse space permit and put to work again. Idle cars are a luxury neither railroads nor the nation can afford these days.

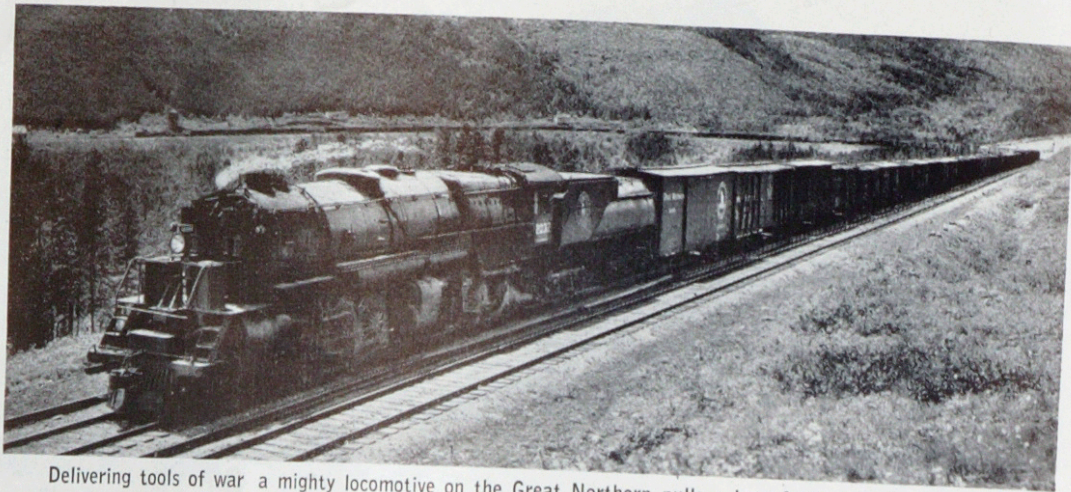
Are the railroads moving the load? At a time when civilians were taking the train to save their own tires, the biggest troop movement in history took place without serious inconvenience to anyone. Of the entire Pullman fleet of 7,000 sleeping cars, 1,500 have been set aside for troop transport and as many as 2,900 have been assigned to the army on peak days of military travel. As for freight, the railroads last year handled the greatest volume in their history, including virtually a two-year grain crop, without a car shortage. The situation looked rather critical last summer, for the grain elevators were still bulging with a record carry-over of 400,000,000 bushels of 1940 wheat when the 1941 harvest came along. Old grain had to be moved out to distant



U. S. STEEL CORP.



Center: Inspecting a wrought steel wheel. Some of these car wheels have averaged 300,000 miles of road service. Bottom: Trainloads of tanks are loaded from one end, the heavy "forts" crawling from the flatcar to flatcar



Delivering tools of war a mighty locomotive on the Great Northern pulls a long freight in the mountains

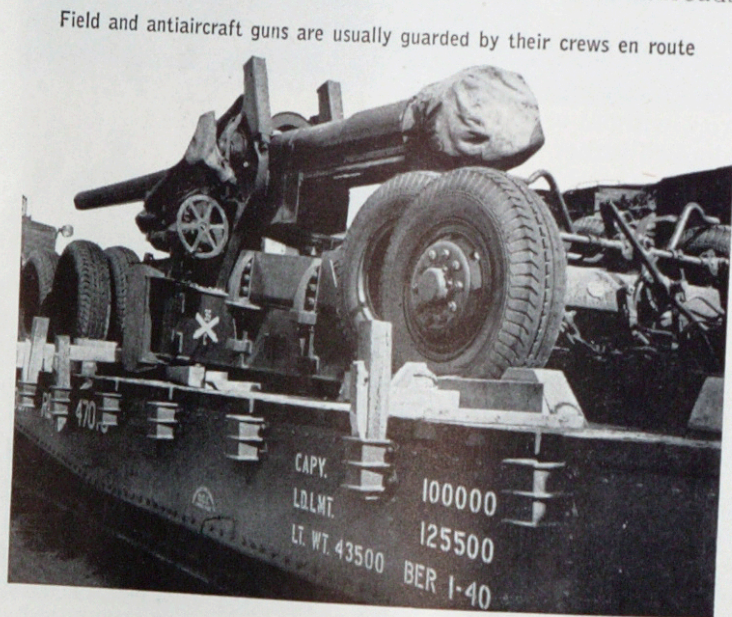
storage points and the new grain moved in. But the railroads assembled a vast fleet of cars and moved the crop in orderly fashion. In one outstanding instance, 500 cars of wheat were hauled from Chicago to elevators in Philadelphia, unloaded and the empties were back in Chicago in less than six days.

It isn't like the days of '17 and '18, when rail transportation bogged down on the eastern seaboard for want of some place to unload the cars and thousands of loaded freight cars lay idle for weeks and months. Actually, at one time 200,000 loaded cars stood on tracks in the north-eastern states, not turning a wheel. Without sufficient ships or warehouse space to

take over the cargo, without an efficient system of controlling the government's "priority" freight, cars that should have been hauling goods became warehouses on wheels. One example was the rush order for piling needed at the Hog Island shipyard. Priority tags got the piling there in a hurry, and before anyone was ready to unload them there were 5,000 flatcars loaded with piling sitting in the nearby railroad yards. They sat there, some of them for months, clogging the terminal tracks and unable to get back into useful service.

That's all changed now. Two important agencies born since the first world war—the railroads' Interterritorial Military Committee and their Car Service Division—are seeing to it that no traffic paralysis can occur again. In general, the former cooperates with the Army Quartermaster General in handling troop movements; the Car Service Division is responsible for efficient management of the nation's supply of freight cars.

From Pearl Harbor forward these railway organizations have been on duty 24 hours a day. The Quartermaster General notifies the Com-



Field and anti-aircraft guns are usually guarded by their crews en route

mittee's Washington office that a division is to start moving in 48 hours, say from a midwestern camp to Seattle. Immediately wires go out to the Regional Committee offices over their interconnecting teletype directing the assembling of 750 to 1,000 cars from the nearest railway centers—in this case perhaps from Nashville, Chattanooga, Memphis, even as far as Chicago, Atlanta and St. Louis. A pool of 50 to 60 locomotives is concentrated at the camp and as many more must be ready to relieve them at a half dozen points on the chosen route to the coast. The mammoth task of diverting all this equipment, manning it, routing it over 2,000 miles of busy rails with scarcely perceptible effect on normal schedules, moving 20,000 men and their personal impedimenta and divisional equipment is an achievement the rails can be proud of.

The average troop train consists of 14 to 20 cars; 10 sleepers carrying 39 men each, another for officers, two baggage cars, one for the army kitchen equipment—all military units serve their own meals except the Air Force, which enjoys dining-car luxury—and additional cars for heavy equipment. Artillery units move on freight trains of 10 to 25 cars, with their men constantly guarding their guns and trucks. Smaller groups of men, of course, travel on regularly scheduled trains.

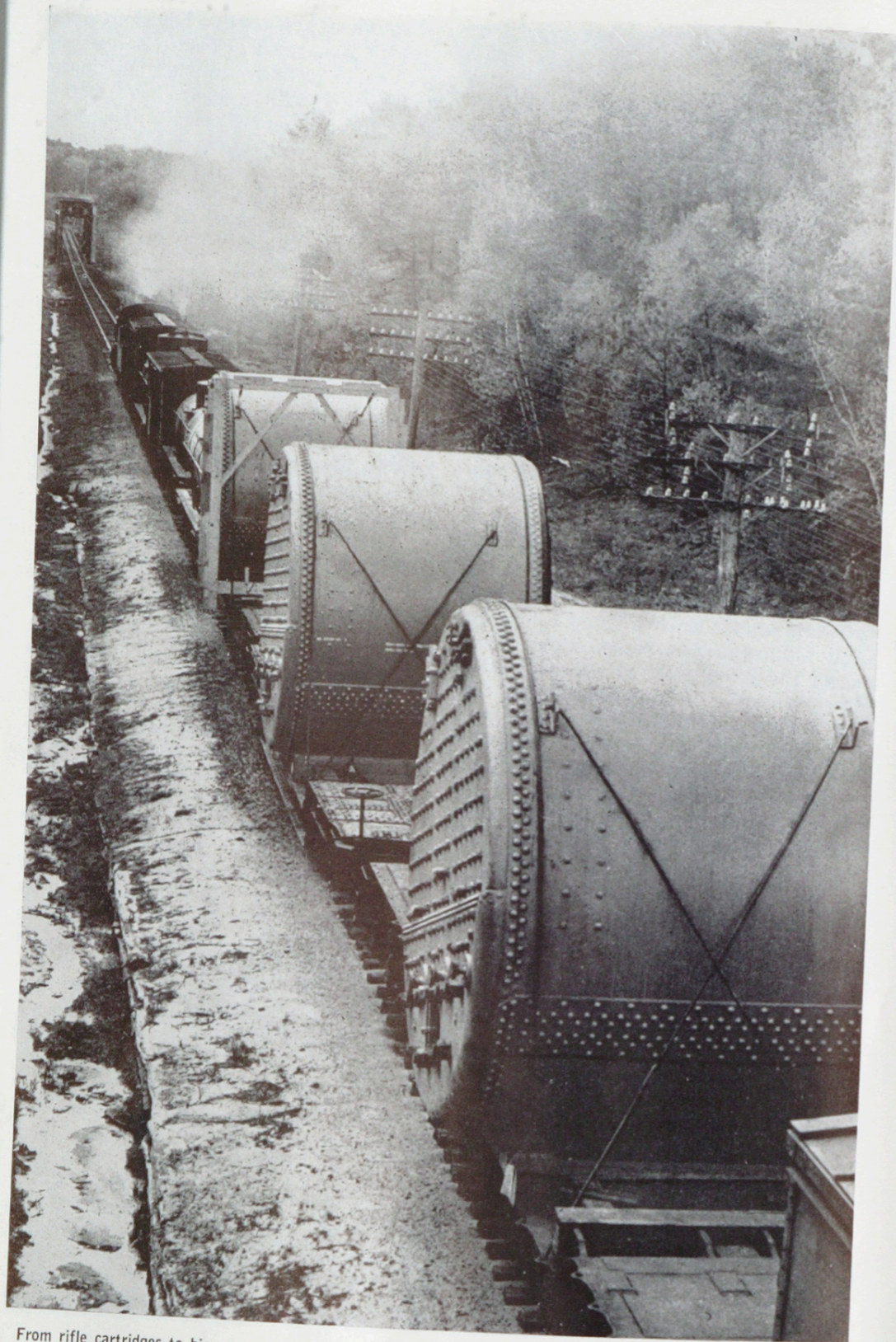
One railroad alone moved 200,000 soldiers and equipment. Another was called on to furnish 1,500 flatcars, 286 automobile cars, 200 tourist sleepers and 89 baggage cars to transport one unit. A motorized unit traveled 3,000 miles in four trains assembled on short notice. One division required 64 trains.

Early this year the government issued an order which meant that 28,000,000 bushels of corn must be moved by rail. That called for more than 15,500 freight cars. The cars were there at the proper time and place. This was no military movement, but it's one example of the gigantic tasks the railroads can take in their stride through the "pooled management" of the Car Service Division of the Association of American Railroads.

From its 22 offices this Division supervises the movement of loaded and empty freight cars between railroads, anticipates the needs, prevents congestion of loaded cars at the ports or shortages of empties where there's a load to carry. Before the tremendous grain crop of 1941 matured the Car Service Division ordered eastern and southern railroads to send a huge fleet of empty box cars to the wheat belt, and there was no shortage. In October alone 175,000 cars of grain moved. If unloading facilities at a seaboard terminal are overtaxed—the bogey in World War I—Car Service issues an embargo halting further shipments to that port until congestion is relieved. If a big manufacturer "hogs" idle freight cars on his siding, Car Service embargoes the plant and it will get no more supplies hauled in or products hauled out until it cooperates in keeping the cars moving.

Shippers, however, are now cooperating to eliminate the waste of idle cars by rapid loading and unloading. And they have cooperated for nearly 20 years in regional Shippers Advisory Boards which are the "crutch" on which the Car Service Division leans in anticipating freight volume. Every three months these boards gather from their 20,000 member shippers, who load or receive four-fifths of the nation's freight, information on their expected freight volume in the ensuing quarter. From these reports the Shippers Advisory Boards issue their forecasts of freight movement. Their judgment guides the Car Service Division in providing cars when and where they're needed; and in the last six years they have been right, on the average, within 3½ per cent. The biggest error in estimate was 6 per cent, in one period when an expected strike did not materialize.

Even the war, which has given the Car Service Division a 24-hour problem assembling the rolling stock for trainloads of tanks and airplane parts and trucks and petroleum and munitions, did not upset the calculations greatly, for the volume of consumers' goods is shrinking as the freight of war increases.



From rifle cartridges to big guns and huge ship boilers—the Iron Horse is ready, willing and able to take the war freight where it's needed

(6)



The
IRON HORSE
Delivers the
TOOLS of WAR

ACME STEEL CO. PHOTO

PART II

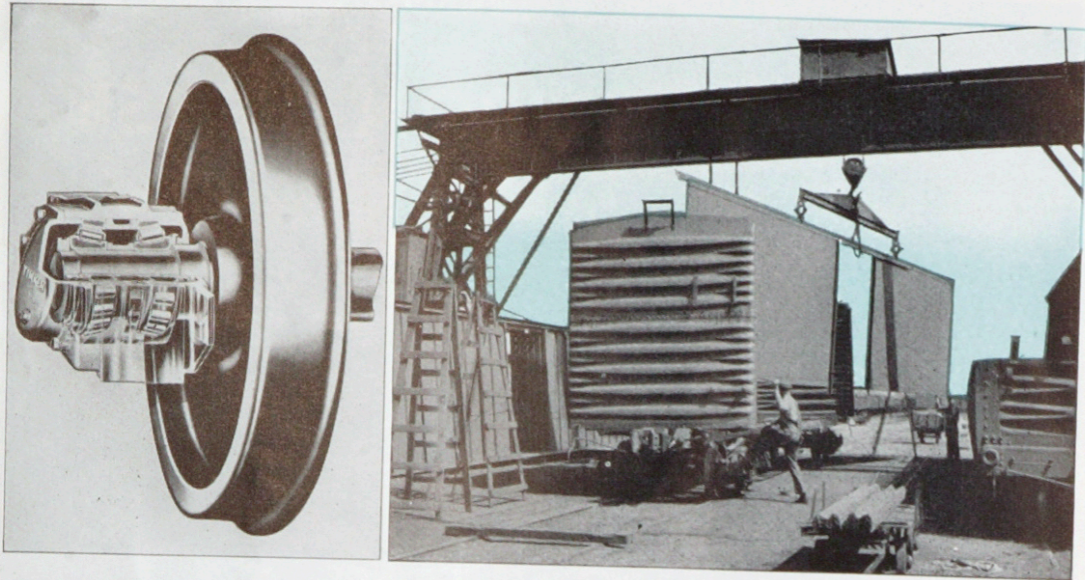
WAR began trying to break the back of the railroads three years ago, and it's still trying. The freight load on American rails rose 55 per cent from May to October, 1939. For many months they have delivered every day more than 5,000 carloads of war materials to government camps and construction projects. That's 50 miles of freight cars a day.

Now that we're in it, the burden grows enormously. Tankers go down in the Atlantic, the east cries for oil, and the railroads step up tank car deliveries tenfold, from 1,827 cars in one January week to 19,926 cars in an April week—an all-time record of 640,478 barrels per day. The Panama Canal is virtually closed to intercoastal ship-

Steel strap for packaging is one of the methods making economical use of freight car space. Union Pacific's "Big Boy" shows its articulation in the odd view below



(7)



ping and the rails take over the job, which may give full-time employment to as many as 35,000 freight cars. Tires are rationed and folks and goods that went by highway go by train.

The stuff they carry is as strange as it is stupendous. Special 24-wheel flatcars cradle a big coast-defense gun. Towering turbine parts ride from eastern factories to western dams. A Denver shipyard builds a vessel for the navy and sends it west by rail. Prefabricated sections of steamers' hulls are loaded at inland plants.

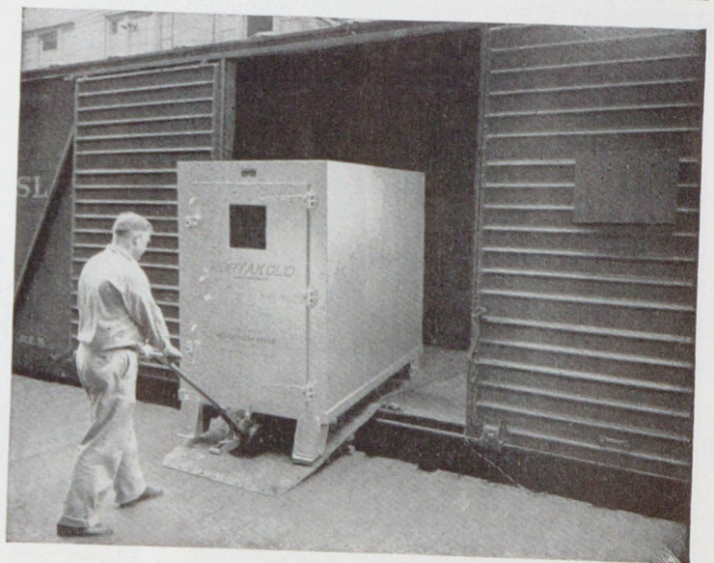
Last year the railroads did the biggest job in history. This year should be 10 per cent bigger. Carloadings are expected to hit a million a week. Last October's peak was 922,000 cars. And yet

Top, left: Roller bearings seen in this "X-ray" view of a Timken journal application smooth the ride of locomotive and cars. Top, right: Erecting side panel of a light steel boxcar at Union Pacific shops. Center: These little lift trucks speed up handling of freight tremendously. Bottom: These gigantic turbine parts for a western dam had to be shipped on specially built freight cars

the railroads are doing this—hauling nearly 25 per cent more tons of freight per mile than in 1918—with 625,000 fewer freight cars and 21,000 fewer locomotives than they owned in that other world war.

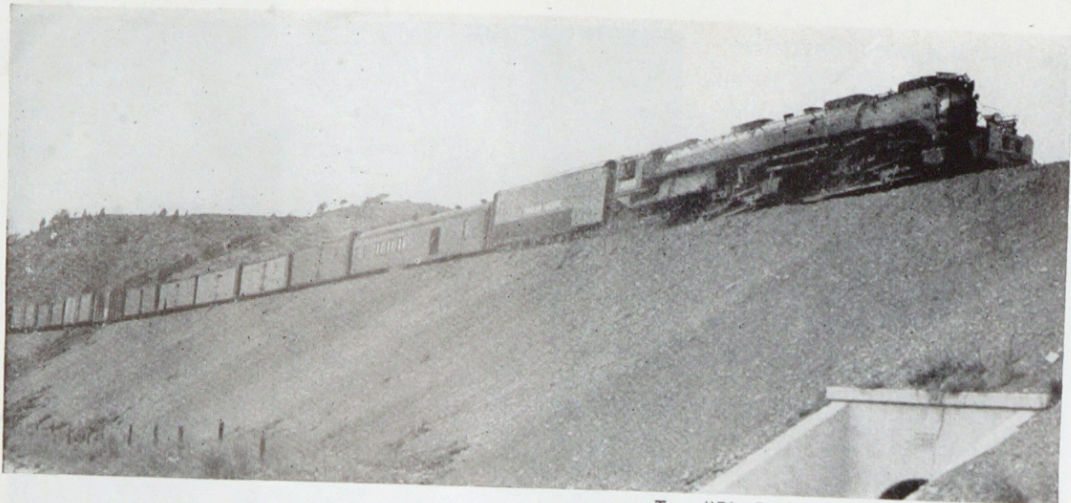
How do they do it? There are a number of answers. "Big Boy" is a typical one. "Big Boy"—there are 20 of him on the Union Pacific line—is a Hercules among locomotives, capable of hauling more than a mile-long freight train more than a mile a minute. Just under 133 feet long, it is the biggest steam freighter in the world, so long that it had to be hinged at the center to take the curves and grades over the Wasatch Mountains between Ogden, Utah, and Green River, Wyo., where it does the work of two ordinary engines. Of the 4-8-8-4 type, "Big Boy" has 16 drive wheels, weighs 1,197,800 pounds and pulls the biggest freight you ever saw at 80 miles an hour top speed, "cruising" at 70.

The railroads may have only two-thirds as many locomotives as they had in '18, but they do more work. The average steam engine of 1918 had a tractive effort of 34,995 pounds; today's average engine is rated at 51,915 pounds. "Big Boy's" rating is 135,375 pounds tractive effort, and it has an expected



Top: Chain conveyor in specially fitted boxcar facilitates loading of engines with minimum packing. Center: This car can be dumped to either side by air valve, and an entire train can be dumped by operating valve from engine. Bottom: The "Portakold" refrigerator carries perishables in ordinary boxcar

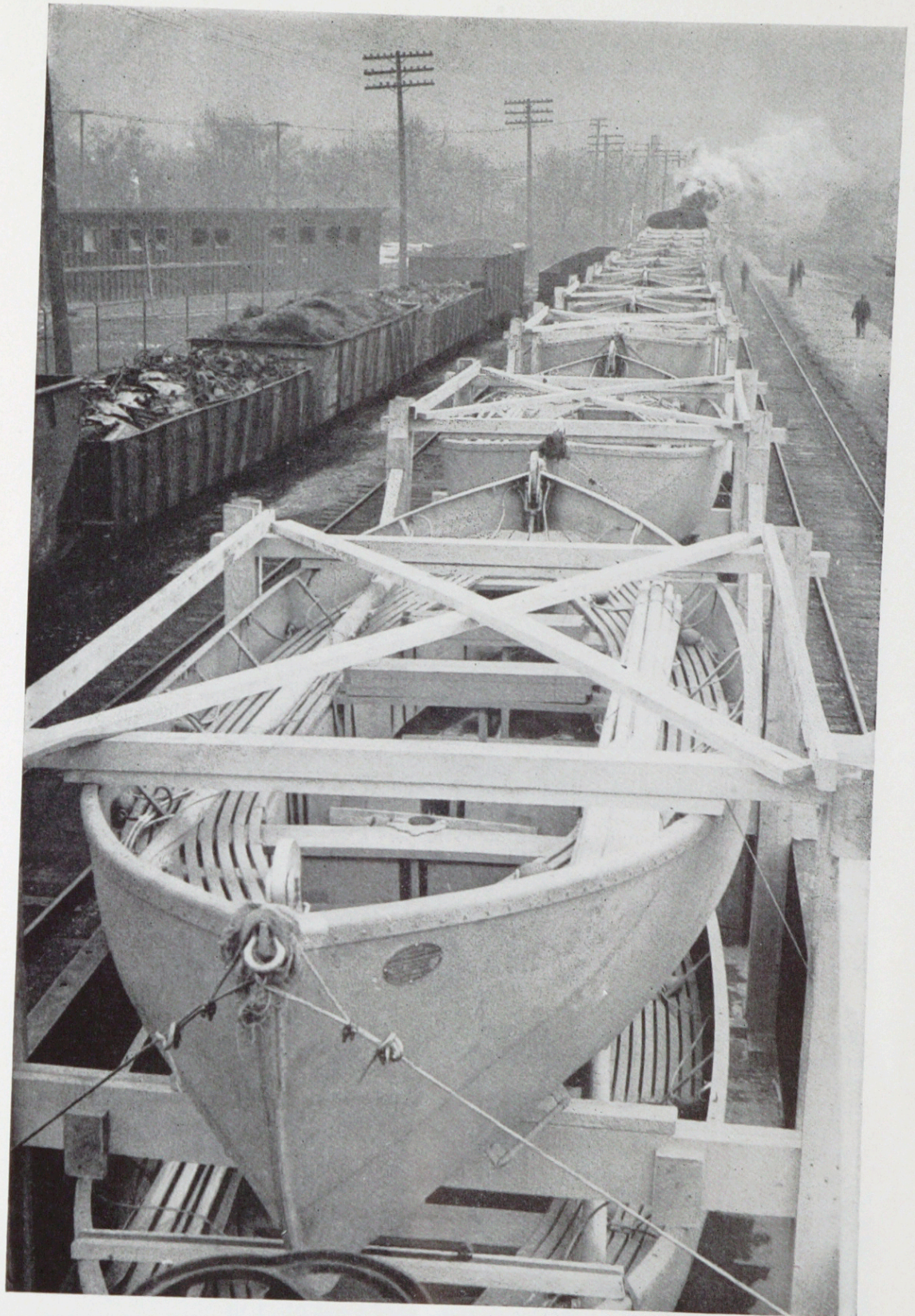
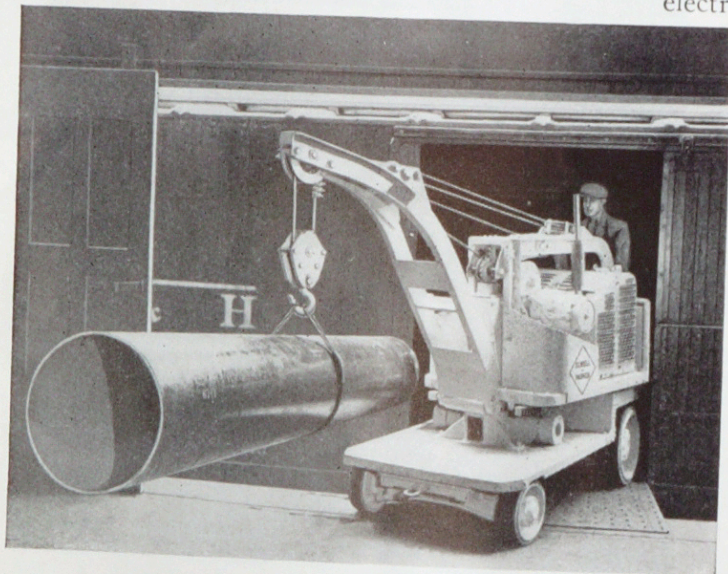
PHOTOS CHRYSLER CORPORATION AND DIFFERENTIAL STEEL CAR CO.



Top: "Big Boy" of the Union Pacific, with 16 drive wheels, pulls a mile of freight more than a mile a minute, "cruising" at 70. Center: Caterpillar Diesel uprooting and salvaging ties from a 60-mile abandoned railroad, loading ties into truck at rear. Below: An Elwell-Parker loading truck carries a pipe into a boxcar



working life of 3,000,000 miles. Another new powerhouse on wheels is the Chesapeake & Ohio Railway's "Allegheny" type, with a 2-6-6-6 wheel arrangement never before used. There are 10 of these \$250,000 locomotives, and more ordered, built to haul coal across the Allegheny Mountains. Another big lift for the general power average of 1942 locomotives is provided by the growing fleet of main-line Diesel-electric freighters with their tremendous tractive effort of 220,000 pounds. All these modern giants are equipped with roller bearings that let them ride with the frictionless ease of a ship in water. A handful of men can push a million-pound locomotive with roller-bearings.



Lifeboats built in a converted stove factory for the U. S. Merchant Marine, en route by rail to the seacoast

have been ironed out, heavier rails installed so that streamliners and freights alike go faster. Twenty years ago less than 1.5 per cent of the steel rails weighed 110 pounds or more per yard; today 22 per cent. Freight car hot boxes then were five times as frequent as now, locomotives broke down seven times as often.

The creaking, groaning, swaying box-car has been to the rejuvenation clinic. It's built now of lightweight steel, some with wrought steel wheels good for as many as 300,000 miles; and the average freight car carries nearly nine tons more than in 1918. The roads will add about 115,000 new freight cars and 1,000 locomotives in the year ending October 1, if materials can be obtained. They're shooting at a fleet of 1,765,000 cars and over 42,000 engines on that date. Since 1923 they've junked 40,700 old locomotives as obsolete!

Fast? The average speed of all freights between terminals—including stops—in 1921 was 11.5 miles an hour; now it's 16.7 miles an hour, 45 per cent faster. Furthermore, they burn less fuel doing it. Twenty years back it took 162 pounds of coal to pull 1,000 tons of freight one mile; today it takes but 111 pounds of coal.

The railroads measure transportation in tons carried per mile. Here's where the contrast between 1918 and 1941 shows up in black and white. In the first half of '41 the ton-miles per freight car were 57 per cent greater than in '18. In other words, today's car is delivering three-fifths more transportation.

Diesel-electric switchers shunt carloads of TNT and high-explosive shells up and down 100 miles of track at one of the government's big new ordnance plants, and there isn't a semaphore in sight. Inside the cab of one of these locomotives the engineer is listening to his radio. "Pick up 5 carloads of TNT at track 7, deliver to magazine 47, track 4," comes an order; and a minute later, "Ten carloads of shells half a mile ahead. Proceed slowly."

A dispatcher controls all the deadly traffic in this vast yard by two-way FM radio. This is a private, "intramural" railway, of course, but it's typical of the

new techniques the roads are adopting. Short-wave radio signals, for example, direct traffic in one big freight classification "hump" yard.

Another system now in operation on many railroads, doubling the capacity of their tracks, is the two-way, reverse traffic signal. It enables the operation of trains in either direction on both tracks. To cite one example, one midwestern railroad is installing two-way signals on a section of its double-track main line, thus converting several miles into the equivalent of a four-track line. The westbound freight that used to pull over into a siding and wait while the streamliner streaked by westward can now roll right along while the fast passenger train highballs past on what normally would be the eastbound track. All the trains on the division will operate without written orders, governed by the wayside signals controlled by dispatchers watching their movements on illuminated "Centralized Traffic Control" boards. Signals on the section of two-way operation read in both directions.

Waybills sent by teletype, messages sent by facsimile and carrier currents step up the pace of both freight and communications. Electric "mules" snake around loading yards hurrying the freight aboard. Tough little electric high-lift trucks pick up huge loads and trundle them into boxcars. One of these baby giants can lift a 10,000-pound loaded steel container and set it in its proper place on a compartment freight car.

It takes all kinds of freight cars to move the load. There are more than 100 types of tank cars specially designed for milk or molasses, oil or acid, water, ice cream. Hopper cars with watertight hatches protect cement and similar perishables from rain. End-loading boxcars accommodate army tanks, trucks, bomber wings. Portable refrigerators on wheels, loaded into ordinary boxcars, obviate the use of a full-size refrigerator car for small lots of frozen foods and flowers and fish. Underslung flatcars take on half-million-pound ingots and ingot molds for armor plate. Pneumatic dump cars automatically tilt to either side to dump 50-yard loads of earth.

In peace time the 235,000 miles of American railways carry about two-thirds of the nation's freight. In war the burden is heavier; more than any other war in history, this is a war of movement. The army has told the railroads they must be ready this year to assign 2,000 cars a day for ordnance shipments.

Every five seconds a freight train starts its run. Every five seconds a passenger train slides out of its terminal.

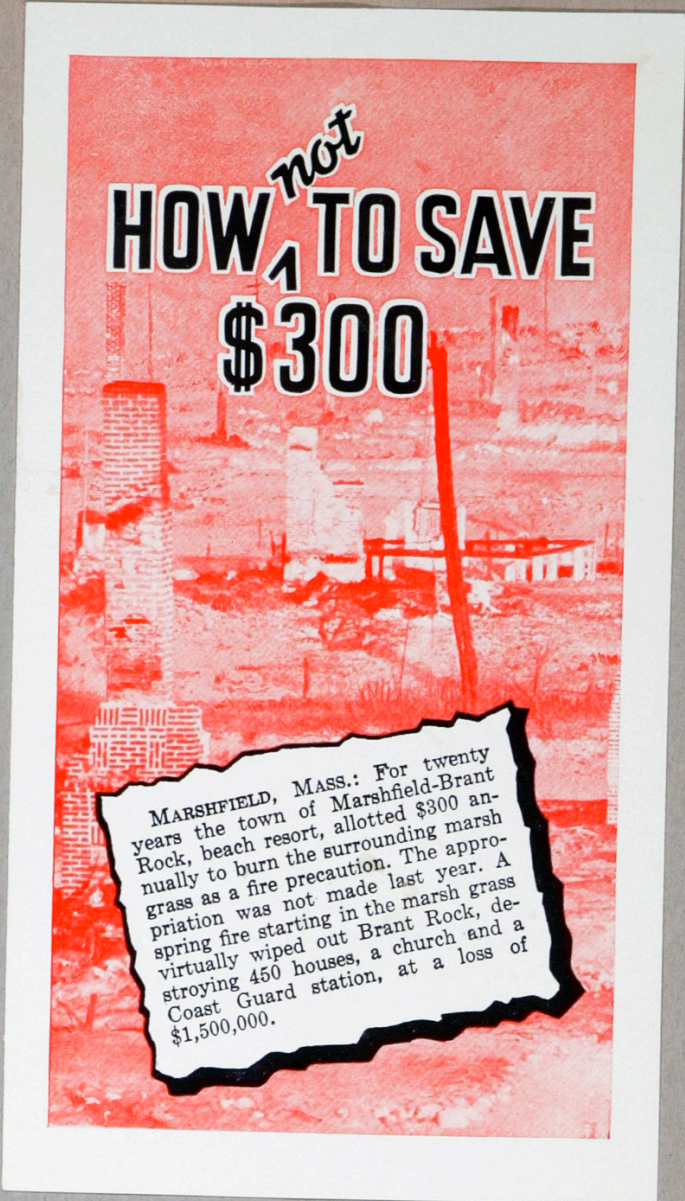
The railway system, says the War Department, is "the backbone" of national defense. The main line is the front line today.



Heat and power for the homes and factories of the East

Know
your
Money

1. Class - of fifteen minute period once a week.



MARSHFIELD, MASS.: For twenty years the town of Marshfield-Brant Rock, beach resort, allotted \$300 annually to burn the surrounding marsh grass as a fire precaution. The appropriation was not made last year. A spring fire starting in the marsh grass virtually wiped out Brant Rock, destroying 450 houses, a church and a Coast Guard station, at a loss of \$1,500,000.

TALKING POINTS

nineteen forty-two edition

WAR AND TUBERCULOSIS
War does not change the fundamentals of tuberculosis control. They always are: *find the sick — treat the patient — restore his earning power — prevent the spread of the disease — keep the family from falling to pieces.* War, however, calls for readjustment of national, state and local tuberculosis programs.

T.B. AND THE ARMED FORCES
The cost of tuberculosis among veterans of World War No. 1 has passed the billion dollar mark. To forestall similar expenses after this war, the armed forces have made preparations to keep tuberculosis diagnostic equipment, especially chest X-ray machines, was made available to give every man in service the benefit of a chest X-ray. Rejections for tuberculosis are about 1 out of every 100 thus eliminated. This has reduced the tuberculosis problem in the armed forces but it has increased the civilian problem.

CIVILIAN T.B. PROBLEMS
Treatment and rehabilitation must be secured for men rejected for tuberculosis.
Health problems, caused by population shifts, lack of adequate housing, sanitation and nutrition, must be solved.
Influx of women into industry, long overtime work, fatigue, night work, unscientific work cycles, harmful recreation, create new industrial health problems.
Depletion of the ranks of medical, nursing and public health personnel creates new administrative problems.
Insufficient hospital beds for the care of tuberculosis patients in many parts of the nation still remains an unsolved major problem.
Inadequate case-finding personnel, aggravated by rapid population increases in industrial areas, retard victory.
Well-intentioned but ill-advised efforts to economize on public health protection put sand in the gears of the war machine.

Check Here

	YES	NO
Have you ever lived with someone who developed tuberculosis? Have you ever worked in a place where one of your fellow-workers has been taken to the hospital with active tuberculosis? (Cured patients hurt nobody)		
Do you tire easily? Have you spells of ill-temper or the "blues" without reason? Does attractive food fail to tempt you?		
Are you losing weight? Do you get attacks of indigestion? Do you have coughs and colds that don't clear up in a few days? Do you feel feverish in the afternoon, sweat at night?		

If your answer to any one of these questions is

Yes

Go see a competent doctor, ask him for a complete physical examination including a chest X-ray.

In its early stages, tuberculosis often does not produce signs and symptoms which tell the doctor there is trouble ahead. The chest X-ray will tell. If your answers are

No

to all the questions:

Go see the doctor anyhow *once a year*. Often serious illness can be prevented by *early discovery* of unsuspected, hidden defects.

HOW ^{not} TO SAVE
\$300

MARSHFIELD, MASS.: For twenty years the town of Marshfield-Brant Rock, beach resort, allotted \$300 annually to burn the surrounding marsh grass as a fire precaution. The appropriation was not made last year. A fire starting in the marsh grass destroyed the church and a loss of

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LOST MANHOURS

The loss of manhours due to tuberculosis is gigantic. In 1940 sanatoria provided 22 to 23 million patient days of treatment; tuberculosis divisions of hospitals provided 6 to 7 million treatment days. These figures, added to the man days of hospital personnel, total more than 40 million man days per year. To grasp the size of this figure, 40 million man days, if employed in war production, would be sufficient to build: 160 destroyers, 940 flying fortresses, 8,000 combat planes, 16,000 light tanks, 20,000 howitzers, 34,900 jeeps or 550,000 .30 machine guns.

TUBERCULOSIS IS PREVENTABLE

All wars in the past have brought an increase in tuberculosis. The disease is still the greatest killer among the communicable diseases.

Tuberculosis can be prevented. How? By maintaining in wartime a well-balanced community program against tuberculosis.

THE CAUSE OF TUBERCULOSIS

Tuberculosis is caused by germs. Without tuberculosis germs there can be no tuberculosis. It is not colds nor flu nor being run down that cause the disease. Only tuberculosis germs can cause tuberculosis. Tuberculosis is NOT inherited.

In 1882 Dr. Robert Koch discovered the germ and proved that when tuberculosis germs are planted in a healthy body they will produce tuberculosis.

There used to be two major groups of germ spreaders—sick dairy cattle and sick human beings. In 1900, out of 2,836 counties in the United States, none was safe from either cattle tuberculosis or human tuberculosis.

Now all counties are free from the danger of cattle tuberculosis, but none is free from human tuberculosis. We have succeeded in cleaning up the cattle herds but not the human community.

TUBERCULOSIS GERMS

Tuberculosis germs, called by scientists *mycobacteria tuberculosis hominis* (when of human origin), *bovinis* (when of cattle strain) are *microbes*. (Micro = small + Bios = life.) They are *bacteria*. (Bacter = plant.) They are a well-defined species with many subdivisions. As they are rod shaped, they are also called *bacilli*. They are members of the large family of yeasts, molds and mold-like plants.

2

INFECTION

Tuberculosis begins with the infection (in = in + facio = to make.) Infection means that germs have made a home in a living body. Infection with tuberculosis germs often produces tiny tubers in the body tissue, thus giving the disease its name. Tuber = nodule + cul = small + osis = a condition. Thus, tuberculosis is the condition of having small tubers in the body caused by the growth of tuberculosis germs.

DISEASE

After a body has become infected 1 of 4 things can happen.

1. The powers of body resistance kill the invading germs. Then all is well.
2. The body and the germs manage to live together side by side, each unable to hurt the other. This happens to about one-half the people of America.
3. Quite often however the balance of host and germs becomes disturbed in favor of the germs, either by inside or outside forces. Then, tuberculosis disease develops. Half a million people are sick with this disease and 60,000 died from it in 1940.
4. When the body's defenses get the best of the germs and balance is established again, physicians speak of arrested disease. When the body kills the germs, tuberculosis has been cured completely.

THE SPREAD OF TUBERCULOSIS

Tuberculosis germs, in order to survive as a species, must enter a host, multiply in number, find a way out again, and find transportation to a new host. Tuberculosis germs are passed from the sick to the well. Thus, tuberculosis keeps going. To stop tuberculosis the migration of germs must cease. This is done by finding carriers of the disease and isolating them, and by cleansing all germ-soiled things.

NO HOME IS SAFE UNTIL ALL HOMES ARE SAFE

Because of lack of understanding thousands of carriers of tuberculosis germs are at large spreading disease and death to people with whom they come in contact.

3

CASE-FINDING — EARLY DIAGNOSIS

When tuberculosis begins, people usually do not feel sick, hence they will not consult a physician. After tuberculosis has advanced, sickness becomes apparent, the doctor is called but the diagnosis, eight times out of ten, is advanced tuberculosis.

Waiting for people to call at the doctor's office after the classic symptoms show (fatigue, loss of appetite, indigestion, cough, loss of weight, etc.) is not likely to increase the batting average of early diagnosis. The early case of tuberculosis should be "looked for" and not "waited for."

Where to look for cases:

1. People who have been in contact with a tuberculous person (contacts).
2. Young women in industry, young mothers, teachers and nurses.
3. Working men, especially in the unskilled labor group.
4. Old people, especially men of 60 years and over.
5. Adolescents.
6. Special groups: Diabetics, Negroes, Mexicans, Indians, Eskimos, Filipinos, relief groups, old people, inmates of institutions, etc.

Who should look for cases?

1. The family physician, by examining every contact of a case under his care.
2. The public health nurse, by following up the contacts as they come to the attention of official agencies through case reporting and the death certificates.
3. Parents, by having growing children tuberculin tested at regular intervals.
4. The school, by mass tuberculin testing of suitable age groups and X-raying of positive reactors among the pupils and employees.
5. Industry, by pre-placement and periodic examinations including X-rays.

(Read 1942 *Early Diagnosis Campaign* pamphlet, "Elementary, My Dear Holmes.")

TUBERCULIN TEST — X-RAY

The positive tuberculin test shows that tuberculosis germs have set up housekeeping in the body of the reactor. The test tells nothing about the state of the infection.

4

The X-ray is used to show whether the germs have damaged the lungs to such a degree that the diseased area in the lung is coarse enough to throw a shadow on a photographic film or fluorescent screen. X-ray evidence always needs the support of a thorough physical examination, but no chest examination is complete without the X-ray.

TREATMENT

The best place to get well is in a modern sanatorium.

Climate no longer is of first importance. Tuberculosis can be cured anywhere in this nation.

Air — The out-of-door days are past. Clean fresh air at a comfortable temperature is good for healthy people and patients alike.

Sun — Prolonged exposure to sunlight may be extremely dangerous to a patient with lung tuberculosis. Sunlight or sunlamp treatment in certain complications of tuberculosis is used only under careful medical supervision.

Food — The days of "stuffing" have gone. A balanced normal diet is usually the proper food for patients.

Exercise has given way to bed rest, often supplemented by lung rest produced by one of the many forms of surgical treatment.

Rest heals tuberculosis.
(Read 1942 *Early Diagnosis Campaign* pamphlet, "If It Happened to You.")

REHABILITATION

Medical treatment alone heals sick lungs, but social treatment together with medical treatment makes taxpayers out of tax-consumers. Old-time occupational therapy such as knitting, embroidering, and so forth, has given way to modern rehabilitation. This means aptitude study, vocational guidance, job training and placement, all designed to make ex-patients self-supporting and to prevent relapse of the disease.

TUBERCULOSIS IN INDUSTRY

A few occupations, exposing workers to germs, such as nursing, medical study, hospital work, are specific tuberculosis hazards. Other occupations with exposure to silica dust, such as foundry work, grinding, quartz mining, ceramics, present a very involved situation where tuberculosis may complicate occupational diseases. Compensation laws and court decisions further complicate the issue. Death rates are highest among unskilled workers, lower among skilled workers and lowest among professional people.

5

Tuberculosis among workers is part of the larger problem of industrial health. Tuberculosis will be found as a by-product in any well conceived industrial health program which includes chest X-ray whether the examinations are sponsored by labor or management or both.

By and large, tuberculosis is not an industrial hazard; rarely is it directly connected with occupation. Yet, tuberculosis is a common disease among working people. The lower the economic level, the more tuberculosis is present.

HOSPITAL BEDS

The need: At least one hospital bed for every person requiring treatment or isolation. Bed requirements are measured by beds per annual death. Two beds per annual death is the minimum standard accepted by most authorities. One annual death means nine living people sick with tuberculosis.

If there have been 10 deaths from tuberculosis within a year, in a community, a minimum of 20 hospital beds for tuberculosis patients are needed. One-tenth of the population in the United States is Negro. One-quarter of all tuberculosis deaths are among Negroes. In some sections exists a dangerous shortage of beds for Negroes.

THE VOLUNTEER AGENCY

Action in public affairs can be achieved by:

Coercion — the dictator's way

Tradition — the "Old World" way

Education — the American way

In a nation of free people it is up to the people to make things happen. The volunteer agency usually demonstrates the need for public services. Not before the people have understood a need are they willing to support public agencies.

The volunteer agency usually pioneers and explore. The official agency is limited by law to continue along established channels. The volunteer agency can experiment with new procedures and demonstrate their practicability. The official agency should take over tested procedures and carry them on with the prestige of the law.

Official agencies often need a spokesman to interpret their work to the people. Volunteer agencies can serve as interpreters.

THE TUBERCULOSIS PROGRAM

By cooperation of the medical profession, the tuberculosis association, official agencies and other community groups, a well-balanced tuberculosis program is created and carries out the following functions:

1. Popular adult health education.
2. Child health education.
3. Education of tuberculosis workers, lay and professional.
4. Case-finding among apparently healthy population groups.
5. Clinics for diagnosis.
6. Consultation services.
7. Hospital care for patients.
8. Public health nursing.
9. Vocational guidance and job training.
10. Job placement.
11. Post-sanatorium care.
12. Administration of public health.

The tuberculosis association is prepared to demonstrate the value of any section of this program with the expectation that the tax-supported agency will carry on after the value of the service has been proved to the voter and taxpayer.

(Read 1942 *Early Diagnosis Campaign* pamphlet, "Keep 'Em Flying.")

ADEQUATE PUBLIC ASSISTANCE

Tuberculosis produces all sorts of financial complications. Wage earners are taken from their jobs, families are thrown on public support, orphans must be brought up. Public and private welfare and relief agencies must face and handle such situations; adequate relief should be provided from public funds.

Christmas Seal funds are like "seed corn"—not to be eaten, but sown where they bear fruit. Providing temporary relief does not get at the root of the relief problem.

EDUCATION

"The first and greatest need is education; education of the people and through them education of the state." Edward Livingston Trudeau, M.D., first president of the National Tuberculosis Association and pioneer in the scientific treatment of tuberculosis in America, made this statement at the first annual meeting of the National Tuberculosis Association in 1905.

"The discovery of popular education as an instrument of preventive medicine by the pioneers of the tuberculosis movement has proved as far-reaching in its results as the discovery of the germ theory of disease years before."—C.E. A. Winslow, M.D., Professor of Preventive Medicine, Yale University.

"The battle against tuberculosis is not a doctor's affair; it belongs to the entire public."—Sir William Osler, M.D., one of the world's foremost teachers of modern medicine.

HOW, ^{not} TO SAVE \$300

SAVING at the wrong place may lead to disasters. Of course, the treatment of tuberculosis patients in tax-supported institutions costs money. The taxpayers want to keep the cost of *patient-days* as low as possible. Saving taxpayers' money is popular, but let us make sure that we are not penny wise and pound foolish.

Adequate treatment of tuberculosis means not only curing sick lungs but also restoring the patient's earning power. Part of modern treatment is medical, part is social and economic.

Medical diagnosis leads to the proper prescription for medical treatment.

Social diagnosis takes stock of the patient's native ability, his aptitudes, his

schooling, so that he can be counseled, guided and retrained for self-supporting work in a paying job after his discharge from the sanatorium.

Keeping both the medical and the extra-medical service of a tuberculosis institution at high standards is good economy. Bringing these costs down to a poorhouse level is the kind of saving the taxpayer can least afford. Cutting budgets below adequate medical and social needs will add many of the survivors of the fight against tuberculosis permanently to the relief load. It carries in itself the danger of having to do the "curing job" all over again because of reactivation of the disease.

Modern tuberculosis treatment—medical and social—costs very little more than old-time medical treatment alone. In the long run, it even costs less as the modern sanatorium returns self-supporting, newly-trained, useful workers instead of helpless and chronic invalids to swell public relief rolls. The modern sanatorium makes taxpayers out of tax-consumers.

The sanatorium gives the patient a chance to get well. By isolating the spreaders of the disease it prevents the development of new cases. There is our biggest saving.

TALKING POINTS

nineteen forty-two edition

WAR AND TUBERCULOSIS

War does not change the fundamentals of tuberculosis control. They always are: *find the sick — treat the patient — restore his earning power — prevent the spread of the disease — keep the family from falling to pieces.* War, however, calls for readjustment of national, state and local tuberculosis programs.

T.B. AND THE ARMED FORCES

The cost of tuberculosis among veterans of World War No. 1 has passed the billion dollar mark. To forestall similar expenses after this war, the armed forces have made preparations to keep tuberculosis out of the ranks. By spring of 1942, sufficient diagnostic equipment, especially chest X-ray machines, was made available to give every man in service the benefit of a chest X-ray. Rejections for tuberculosis are about 1 out of every 100 thus examined. This has reduced the tuberculosis problem in the armed forces but it has increased the civilian problem.

CIVILIAN T.B. PROBLEMS

Treatment and rehabilitation must be secured for men rejected for tuberculosis.

Health problems, caused by population shifts, lack of adequate housing, sanitation and nutrition, must be solved.

Influx of women into industry, long overtime work, fatigue, night work, unscientific work cycles, harmful recreation, create new industrial health problems.

Depletion of the ranks of medical, nursing and public health personnel creates new administrative problems.

Insufficient hospital beds for the care of tuberculosis patients in many parts of the nation still remains an unsolved major problem.

Inadequate case-finding activities due to lack of population increases in industrial areas, retard vic-

Well-intentioned but ill-advised efforts to economize on public health protection put sand in the gears of the war machine.

The Present V



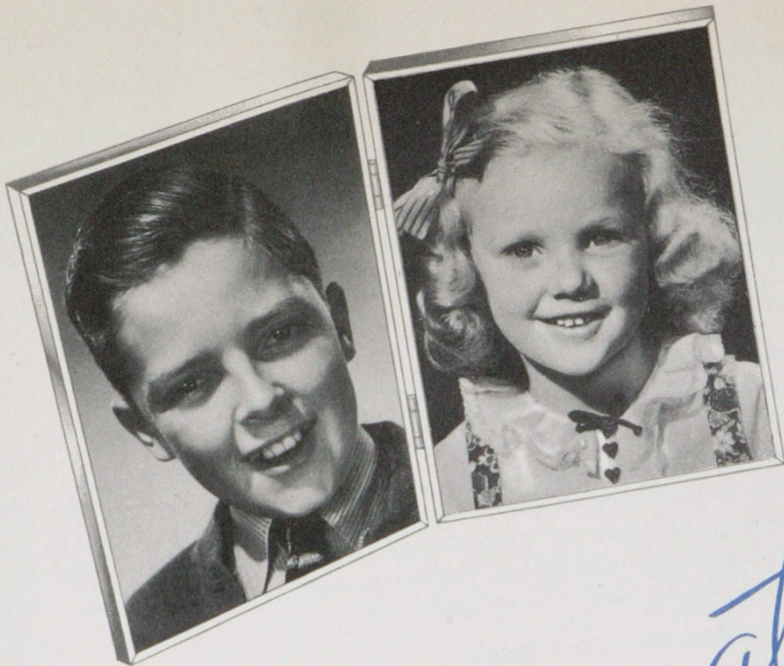
Sugar Rationing

Begin May 4, 1942

Gas Rationing

Ration Book No. 2

Beginning Feb. 22



about rheumatic
fever



MY FRIEND NICK



A Mother Writes:

Dear Doctor:

Recently I read that rheumatic fever is one of the serious diseases which threaten children. I am the mother of a boy 10 years old and a girl 6 years old. I should like to know more about rheumatic fever, so that I can do everything possible to safeguard my children against the dangers associated with it. Here are some questions which I should like you to answer:

How can I tell if my child has rheumatic fever?

What causes the disease? Is there a cure for it?

Why is it so serious?

Can a child have rheumatic fever more than once?

How many children have the disease?

What can I do to protect my children against it?

What can a doctor or parent do for a child whose heart has been damaged by rheumatic fever?

If you can give me any further information on the subject, I shall be very glad to have it. Thank you.

Sincerely yours
Louise Williams

- 3 -

(7) Regarding precautions against rheumatic fever: Make sure that your children follow the rules of good personal hygiene, with medical examinations at frequent intervals. Rest, play, sunshine, and nourishing food will help to build up children physically, so that they may ward off sickness.

Children who have rheumatic heart disease are frequently treated as cripples. In fact they have been referred to as "cripples who do not limp." This is an impression that we must break down. Unless the heart is severely damaged by acute attacks of rheumatic fever the child should be allowed to live normally. By this I mean that he should be permitted a normal range of activities when the doctor so advises. He should be allowed to play and to enjoy other childhood pleasures, excluding strenuous competitive games which would place a strain on the heart and tax his strength. The child who has had a mild attack of rheumatic fever or who may have some degree of heart disease should not be coddled but should have "the run of the house" just as other boys and girls do. In short, he should be led to enjoy his home and school life, within certain limitations. Of course, this does not apply to the child who has had repeated acute and serious attacks of rheumatic fever and whose heart is severely damaged as a result.

Parents cannot be too careful when rheumatic fever strikes. But don't think, just because Johnny has been sick and may be abed again with rheumatic fever, that he is a chronic invalid. Leave it to the doctor to determine his resumption and range of activity. Don't pamper him, or else he may find it hard to adjust to a normal life.

So remember, Mrs. Williams, in ordinary rheumatic fever in children, the doctor treats the infection while it lasts, which may be a long and trying time. When that has passed and the child has no serious heart damage, he should be permitted reasonable activity, so long as he does not become unduly fatigued.

If you wish any additional information, please let me know.

Cordially yours,

H. B. Kelly
H. B. Kelly, M.D.

MY FRIEND N



(Note: The names used in this publication are fictitious.)

A Doctor Replies:

Dear Mrs. Williams:

It is a pleasure to have your letter asking for information on rheumatic fever. Doctors are encouraged when parents display such an interest in the health of boys and girls. I am particularly glad to receive your inquiry concerning rheumatic fever, for two reasons: (1) If parents understand rheumatic fever and its aftereffects, they can help the medical profession in its efforts to control this disease, and (2) unnecessary fear has been aroused in many quarters concerning the seriousness of rheumatic fever.

As to the specific questions which you have asked, I am glad to give the following answers:

- (1) The signs and symptoms of rheumatic fever: Among the first or earliest warning signals the child may have are slight fever, nosebleeds, loss of appetite, failure to gain weight, rapid heart action, and pain (often vague and fleeting) in joints and muscles. These rather vague signs and symptoms make the disease difficult to recognize early. But this is why you should consult your physician if your child has any of these symptoms which you cannot readily explain. More definite signs that aid the doctor in diagnosis include nodules under the skin, very painful and inflamed joints, and high fever. The condition popularly known as St. Vitus's dance, or chorea, causing emotional disturbances and nervous twitching, is now recognized as a manifestation of rheumatic infection. Of course, many children with nervous twitching do not have St. Vitus's dance.
- (2) The cause and cure of rheumatic fever: The cause of this disease is unknown, though investigators are now studying the role which may be played by the streptococcus germ. There is no specific cure for the disease. Unlike diphtheria and other diseases against which the body builds up immunity following an attack, rheumatic fever can attack a child again and again. The period of life when the disease generally occurs is between 5 and 15 years of age.

- 2 -

- (3) The greatest danger from rheumatic fever: The damage done to the heart is the chief danger resulting from this disease. The infection may strike at the delicate valves of the heart, causing scarring and deformity. Defective valves allow blood to leak back in the wrong direction instead of closing tightly at the proper times. The heart muscle, too, may be injured by the rheumatic infection and by the overwork caused by the leaky valves.
- (4) Your fourth question, regarding whether or not a child may have rheumatic fever more than once, has already been answered. However, I might add something further on this point. During the acute attack, a child should be kept in bed and under strict medical supervision. The period in bed may last weeks or months, according to the severity of the attack. By means of certain signs and tests, the doctor can tell when the illness has cleared up sufficiently to allow the child to lead a more normal life.
- (5) The prevalence of the disease: It cannot be stated accurately how frequently rheumatic fever occurs, because cases are not yet reported to health departments as are measles, diphtheria, and many other diseases. However, it is estimated by reliable authorities that there are probably 1,000,000 persons in the United States with the disease's most serious aftereffect—rheumatic heart disease. This causes 40,000 deaths annually. In the New England States it is conservatively estimated that 1 percent of school children have rheumatic heart disease.
- (6) What can be done for children with rheumatic heart disease: Close medical supervision may prolong the lives of children suffering from this disease. The child must be taught the importance of good personal hygiene, with emphasis on rest and good food. He must also be protected so far as possible from contact with those suffering from respiratory infections or sore throats. He should be protected against wet weather and dampness. While these precautions are no guarantee that a child will be spared, repeated attacks of rheumatic fever are less likely if these measures are followed.

- 3 -

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Cordially yours,

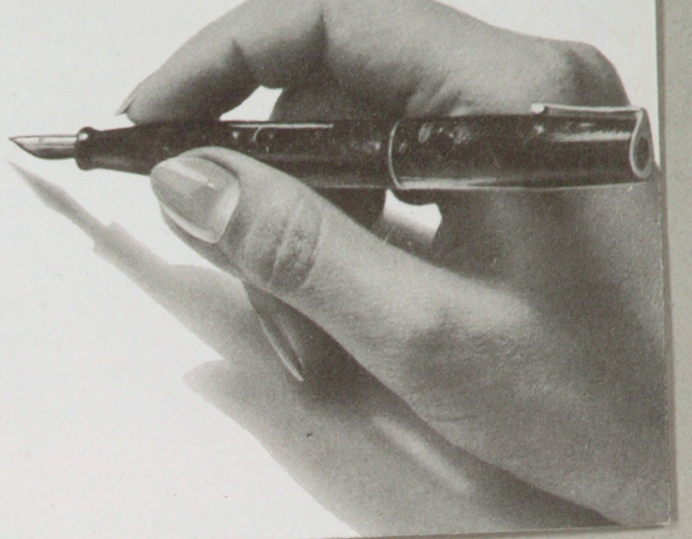
H. B. Kelly
H. B. Kelly, M.D.

(Note: The names used in this publication are fictitious.)

MY FRIEND N

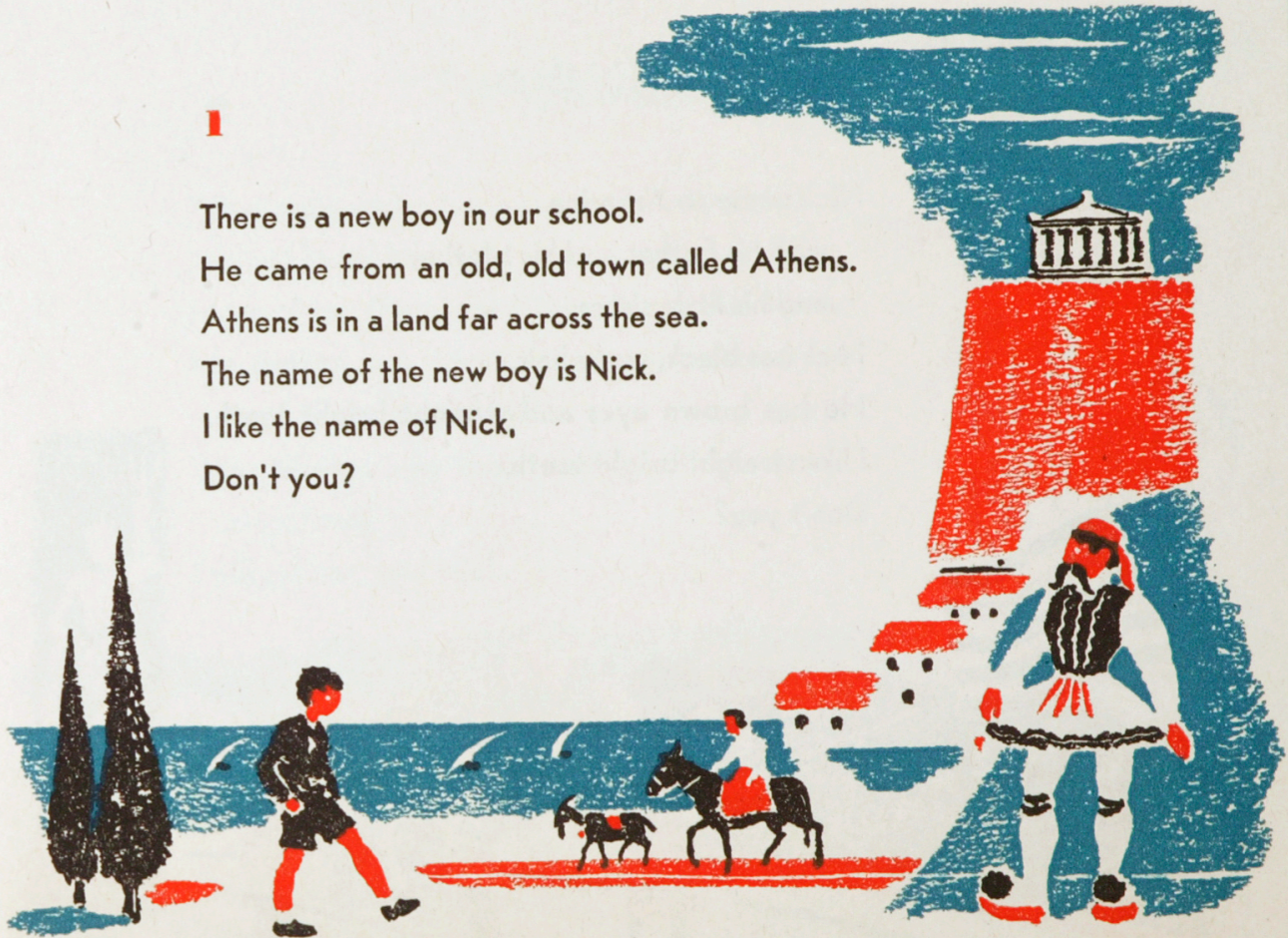


about
fever



I

There is a new boy in our school.
He came from an old, old town called Athens.
Athens is in a land far across the sea.
The name of the new boy is Nick.
I like the name of Nick,
Don't you?



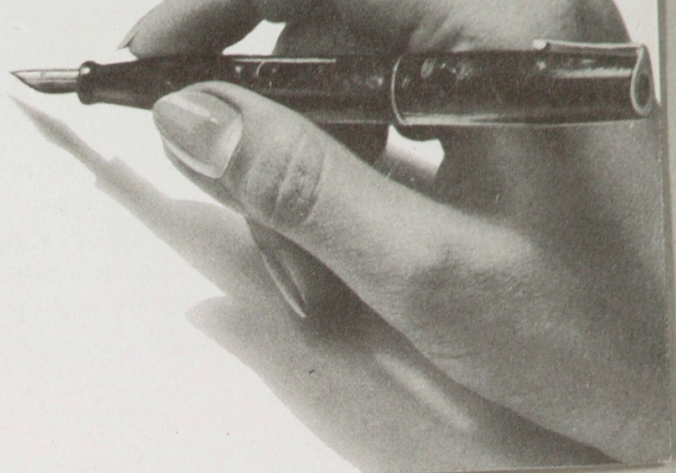
Illustrated by John Merryweather

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18cm x 24cm

24cm x 30cm

about
fever



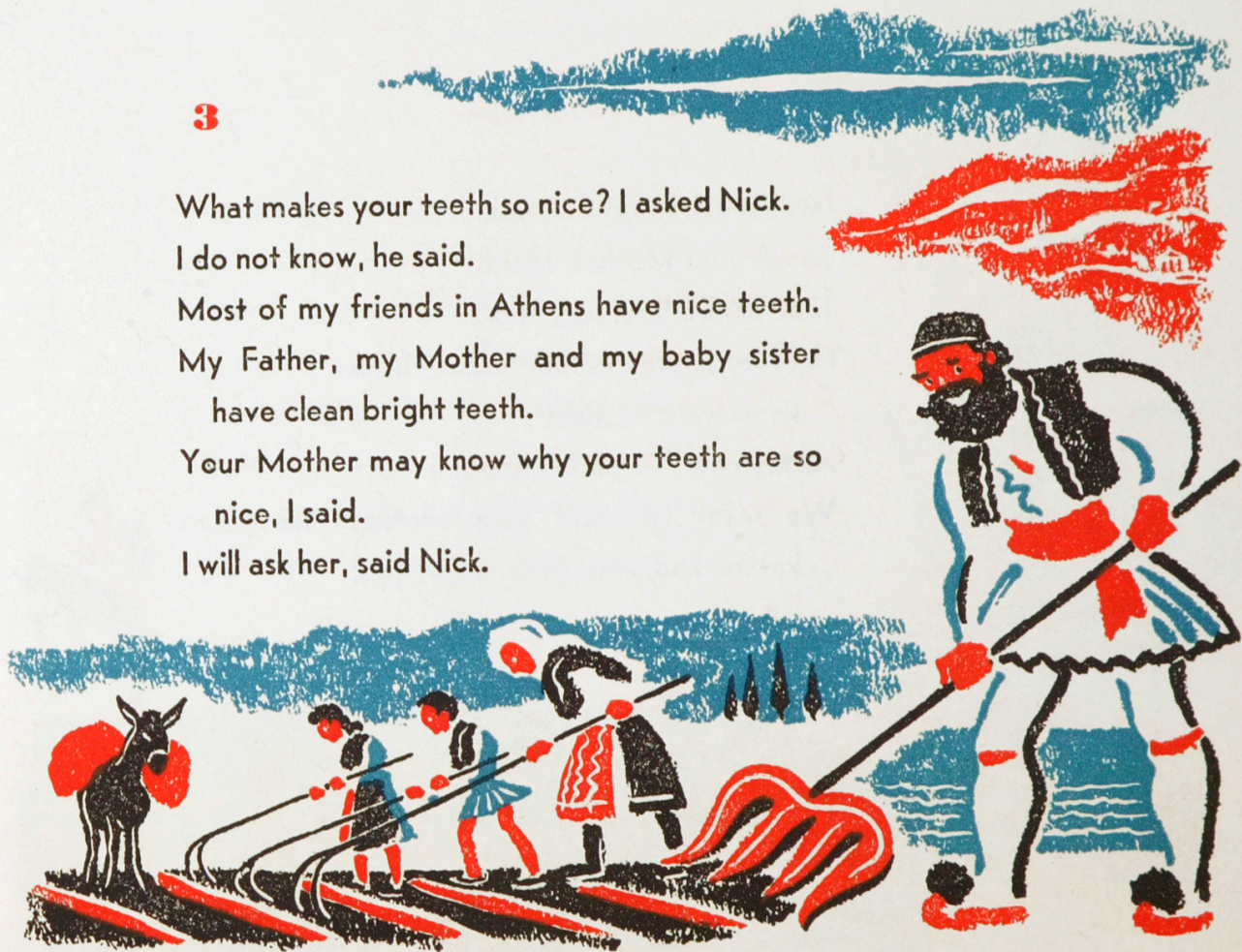
2

Nick came to America
with his Father and his Mother
and his little sister.
Nick has black, wavy hair.
He has brown eyes and straight bright teeth.
I like straight bright teeth,
Don't you?



3

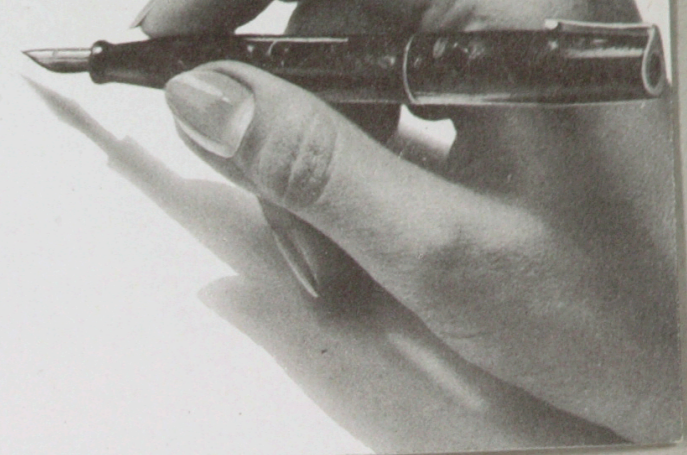
What makes your teeth so nice? I asked Nick.
I do not know, he said.
Most of my friends in Athens have nice teeth.
My Father, my Mother and my baby sister
have clean bright teeth.
Your Mother may know why your teeth are so
nice, I said.
I will ask her, said Nick.



18cm X 24cm

24cm X 30cm

abc
fever



4

I would like to go with you
To ask your Mother, I said.
That will be fine, said Nick.
My Mother, my Father and my little
sister want to meet
All my new friends in America.
We want to meet your Mother and your
Father and your little sister, too,
I said.



5

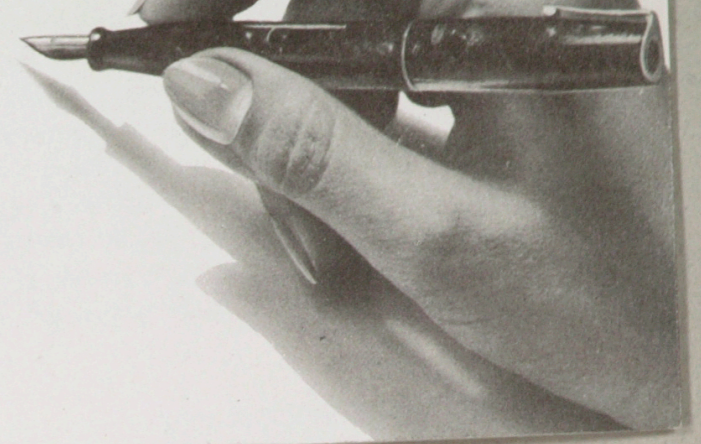
Nick's Mother has big brown eyes
And dark wavy hair like Nick's.
This is my new friend, John,
Said Nick to his Mother.
I am pleased to meet you, she said.
When she smiled she showed
Her pretty, bright teeth that gleamed
Like Nick's.



18cm X 24cm

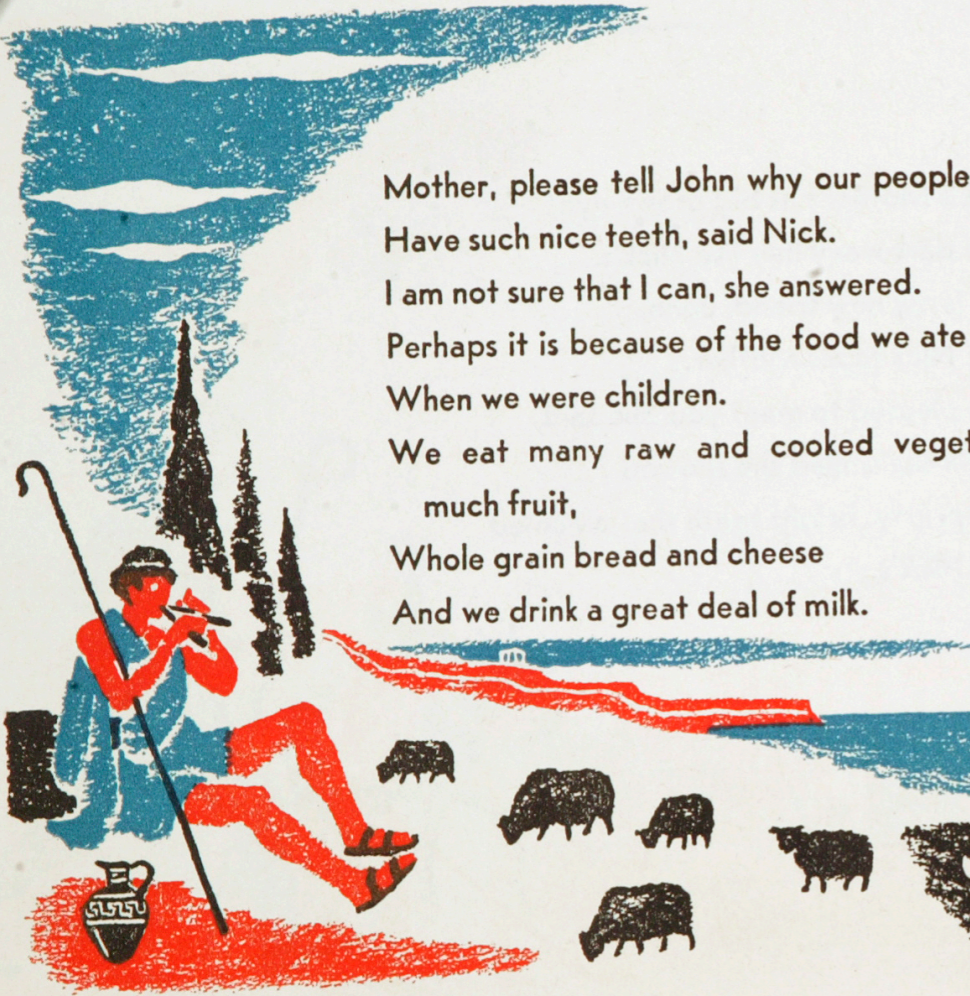
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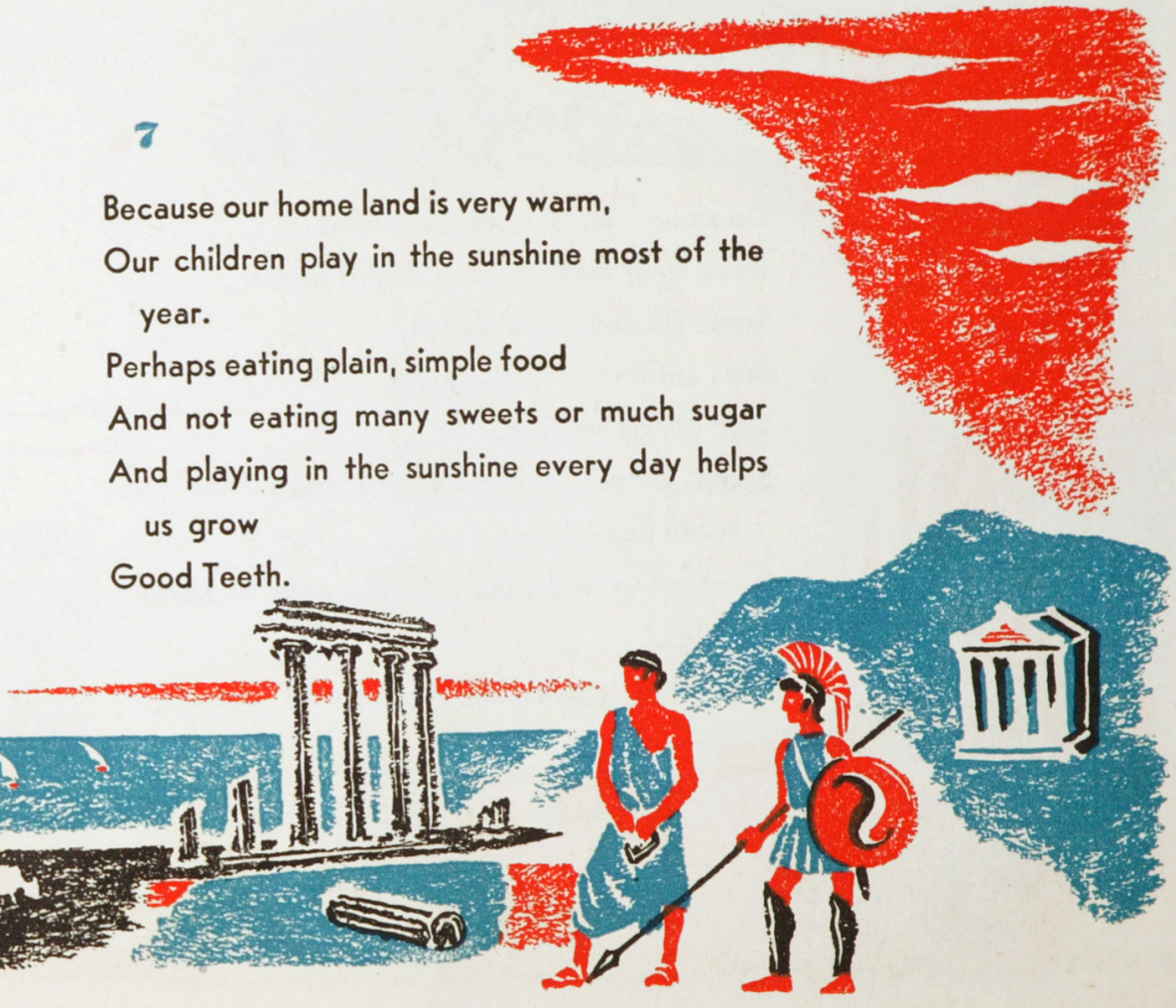
6

Mother, please tell John why our people
Have such nice teeth, said Nick.
I am not sure that I can, she answered.
Perhaps it is because of the food we ate
When we were children.
We eat many raw and cooked vegetables,
much fruit,
Whole grain bread and cheese
And we drink a great deal of milk.



7

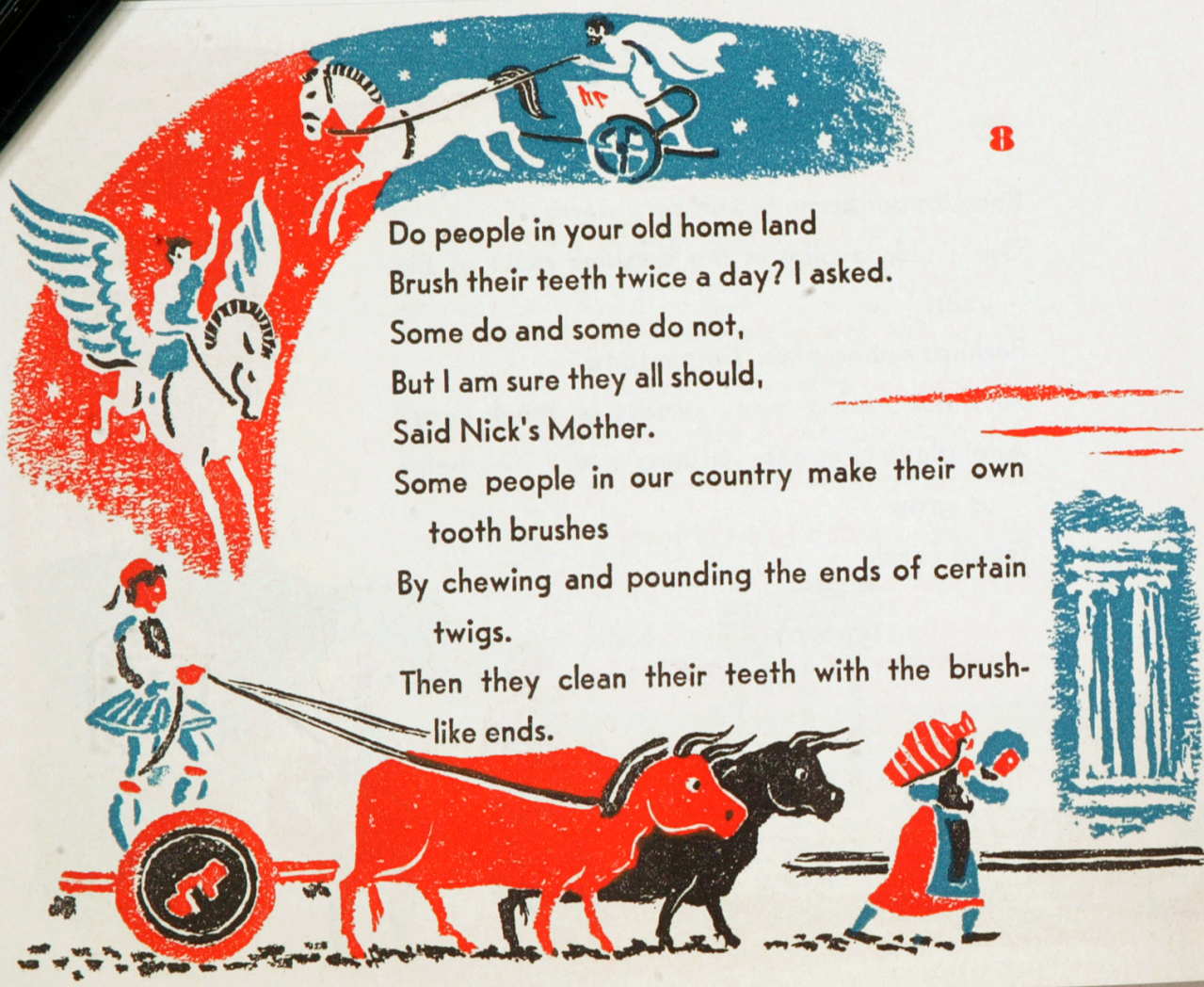
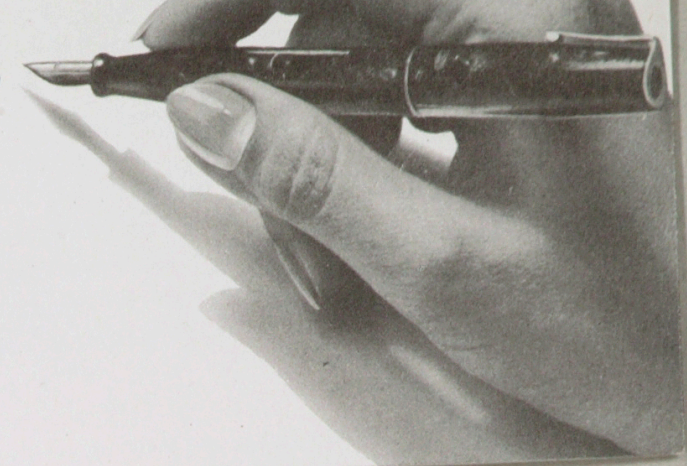
Because our home land is very warm,
Our children play in the sunshine most of the
year.
Perhaps eating plain, simple food
And not eating many sweets or much sugar
And playing in the sunshine every day helps
us grow
Good Teeth.



18cm X 24cm

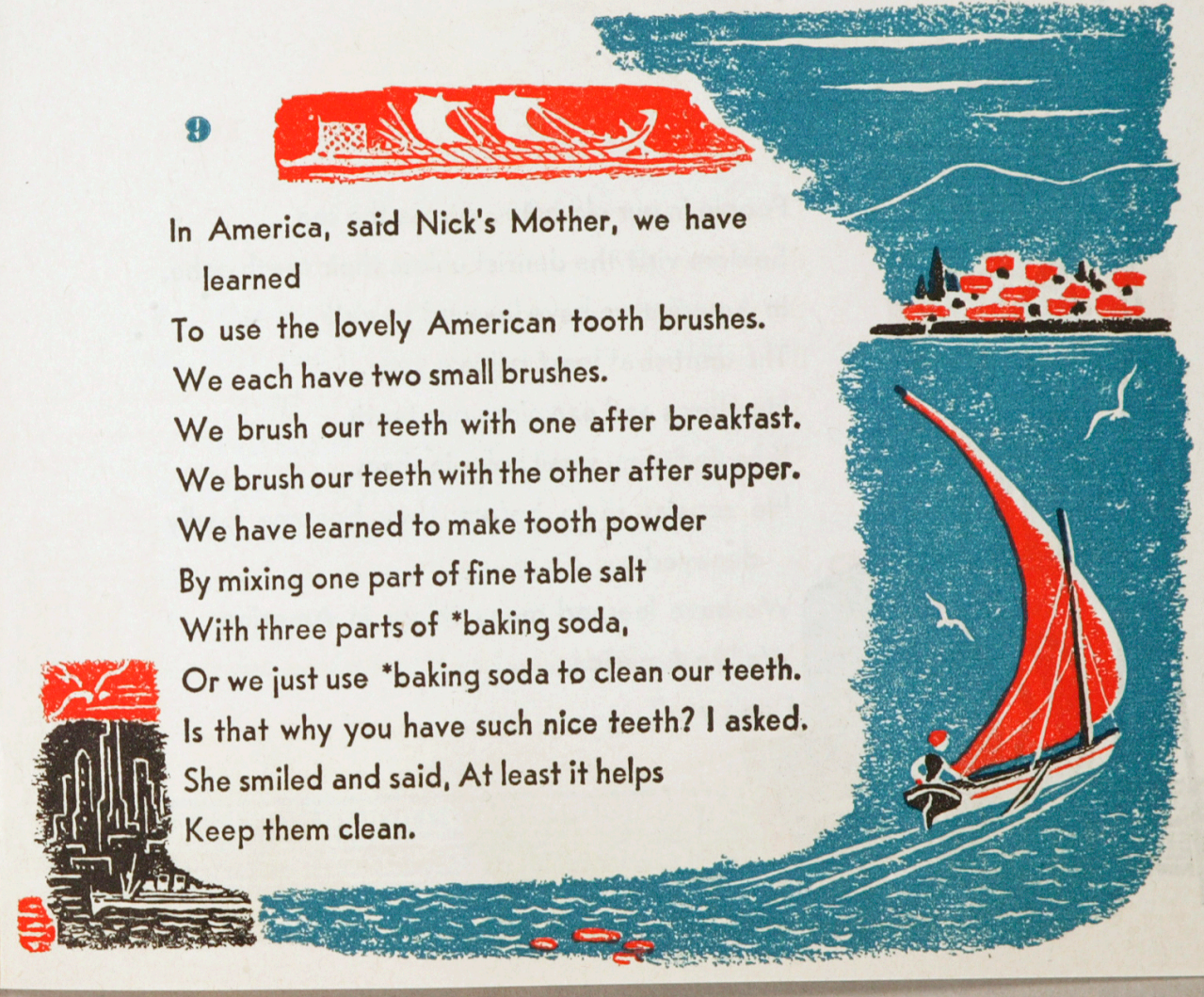
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about
fever



8

Do people in your old home land
Brush their teeth twice a day? I asked.
Some do and some do not,
But I am sure they all should,
Said Nick's Mother.
Some people in our country make their own
tooth brushes
By chewing and pounding the ends of certain
twigs.
Then they clean their teeth with the brush-
like ends.



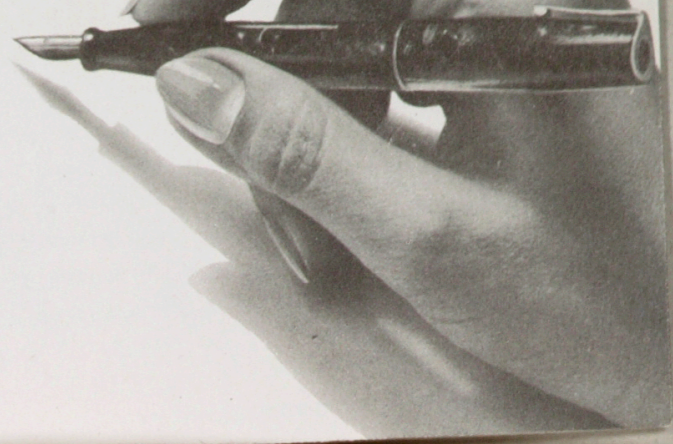
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In America, said Nick's Mother, we have
learned
To use the lovely American tooth brushes.
We each have two small brushes.
We brush our teeth with one after breakfast.
We brush our teeth with the other after supper.
We have learned to make tooth powder
By mixing one part of fine table salt
With three parts of *baking soda,
Or we just use *baking soda to clean our teeth.
Is that why you have such nice teeth? I asked.
She smiled and said, At least it helps
Keep them clean.

18cm X 24cm

24cm X 30cm

also
fever

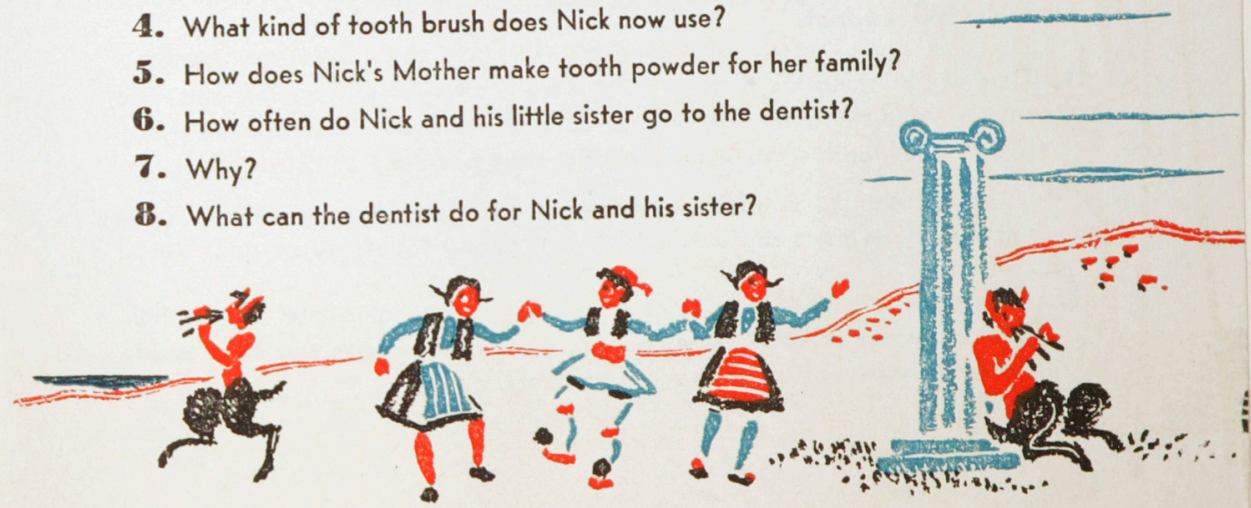


People in our old home across the sea
Seldom visit the dentist unless their teeth ache.
In America we have learned to visit
The dentist at least twice a year.
He cleans and examines our teeth.
If he finds any small holes in them,
He repairs them before they become badly
decayed.
We have learned many things in America.
We like America,
Don't you?

NOTICE

THIS PAGE IS FOR CHILDREN ONLY

1. What country do you think Nick came from?
2. What kind of food did Nick's Mother think helped her family have nice teeth?
3. What kind of a tooth brush do some of Nick's former friends use?
4. What kind of tooth brush does Nick now use?
5. How does Nick's Mother make tooth powder for her family?
6. How often do Nick and his little sister go to the dentist?
7. Why?
8. What can the dentist do for Nick and his sister?



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NOTICE

THIS PAGE IS FOR TEACHERS ONLY

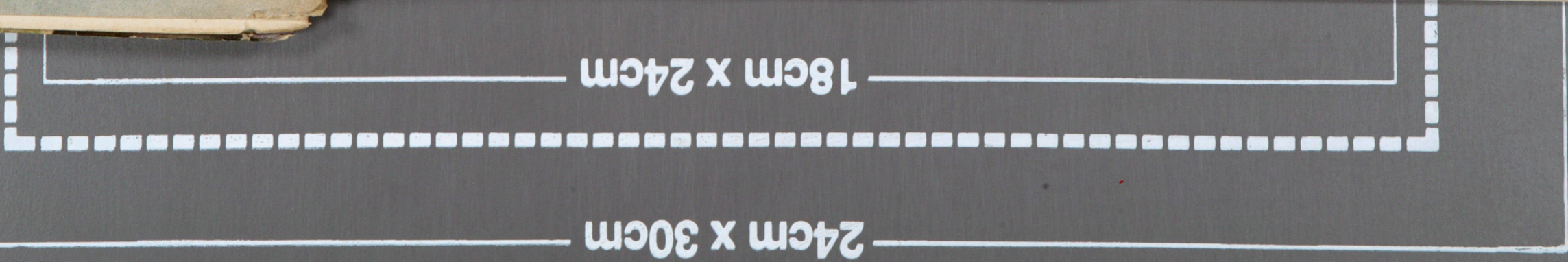


Encourage the children in your school to develop the following dental habits:

1. Eating plenty of plain nourishing foods such as: vegetables, fruits, whole grain cereals and bread and milk, dairy products, eggs and meat—and eating a minimum amount of sweets.
2. Eating some tooth exercising foods at each meal such as crusts, raw vegetables and raw fruits.
3. Carefully brushing the teeth at least twice a day—after breakfast and after supper (have the dentist show each child the best way to brush the teeth), using a small tooth brush and a good cleansing powder.
(A good cleansing powder may be made by mixing one part of fine table salt with three parts of *baking soda or *baking soda may be used alone.)
4. Visiting the dentist at least twice a year for a thorough dental examination. Also encourage children to take plenty of outdoor exercise and sleep and to protect themselves from the various childhood diseases.

Church & Dwight Co., Inc.
70 Pine Street
New York, N. Y.

*Arm & Hammer and Cow Brands Baking Soda are classified as Acceptable Dentifrices by the Council on Dental Therapeutics of the American Dental Association



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