

# FRENCH FORESTS IN THE WAR

By MAJOR BARRINGTON MOORE

**A**FTER the first two years of the war, the tonnage shortage made it impossible to ship wood to France, except aeroplane stock and the like, for wood is very bulky and the necessary shipping would have been enormous, more than could possibly have been spared with safety. Yet wood is a military necessity.

The ports of France were not built with a view to the landing of large armies, and were wholly inadequate; yet the speedy debarkation of the troops, with their munitions and supplies, had to be assured at all costs. The submarines forced the ships to come in convoys of ten or fifteen at once, requiring several times the docking space the same number of ships would have needed singly. Wharves, miles of wharves, were of immediate necessity. For this we must have piling and wharf timbers.

But, once the troops and supplies were landed, our difficulties did not end. It was necessary to find shelter for them. Sacks of flour cannot be left out in the rain. Warehouses became necessary, warehouses of gigantic size and capacity. Railroads had to be laid in the warehouses, one depot alone requiring eighty-five miles. Lumber for these warehouses had to be furnished immediately.

Wherever possible, we billeted our troops in houses to save barracks. But the crowded condition of the country, owing to the refugees from Belgium and the invaded parts of France made this inadequate. Our men

were dying of pneumonia. We simply had to have barracks. Every suitable building that could be found anywhere in France was turned into a hospital, but yet there were not enough. We required large quantities of lumber for hospitals.

After the army was landed, its supplies cared for, and the men were in billets or barracks—in all of which wood plays the leading role—the army must be moved forward. As a matter of fact, it had to be moved forward even before the preparations for landing were completed. Everything was done under the utmost tension, and still not rapidly enough.

The transportation of men and guns, with munitions and supplies, required the construction of new railroad lines and the double-tracking of others. Ties became more important than guns, because without the railroads the guns could not be brought to the front. When the Germans broke through in March and got within close range of Amiens, they paralyzed the main artery between the French and British armies. Another railroad had to be built, and built quickly. Fortunately, the Canadians had ties ready cut for an emergency.

In order to permit one organization to communicate quickly with another, it was necessary to construct telephone and telegraph lines. This called for thousands and thousands of poles.

Cooking the food and keeping the men warm meant tons and tons of fuelwood.



A FRENCH FOREST DEVASTATED BY WAR. MILITARY WORKS VISIBLE, RIGHT CENTER

At the front, trenches and other defensive works called for large numbers of props, barbed wire pickets, and other round material.

To bring up the artillery quickly over the shell-torn ground, it was necessary to build hasty roads with five-inch plank. The amount of lumber consumed as road plank was enormous.

Add to the foregoing an insistent demand for lumber to make packing cases and for countless smaller uses, and you will have some slight conception of wood as a military necessity.

chief of the French transportation system, told us with vivid emphasis that failure to send forestry troops promptly would spell disaster. General Pershing was so anxious about the situation that he personally dictated an urgent cable asking the War Department to stop sending fighting men until they had first sent forestry troops.

But, what will be the use of sending forestry troops and sawmills unless there is enough standing timber? The vital question then was, did France possess enough standing timber to fill the indispensable requirements not only of their own army and civil population, but of the



A PORTION OF THE FIRST AMERICAN FORESTRY CAMP, WITH OFFICE TENT AND Y. M. C. A. HUT IN CENTER, LOCATED AT BELLEVUE, LANDES, FRANCE

We had not been in France long before this necessity for lumber faced us in terrible earnestness. Our Army engineers had always found at hand whatever materials they needed, and they drew up elaborate plans accordingly. The Chief of Engineers of the A. E. F. called in Colonel Graves and made him responsible for furnishing the lumber to carry out these plans. Accordingly Colonel Graves and I went to work to procure it. We knew that the tonnage shortage prevented our importing it, but we understood that the French would fill our first requirements.

What was our dismay to learn that by furnishing us lumber the French had simply meant they would furnish us the trees standing in the forests. They had no piles, and they had not enough lumber or ties for themselves. Even worse, they had no labor. What were we to do? The situation was critical. Our troops were on their way over, and we had nothing built to receive them, nor any materials with which to build. We must have forestry troops and sawmills at once. Mr. Claveille, the

British army and the American army as well? The construction program of the American engineers called for lumber in quantities which staggered the French.

Fortunately, France did have the forests. The situation was saved, the war shortened by many long months. And why did she have them? Because she had practiced forestry for generations.

We must not imagine that she always practiced forestry. Like other countries, she began by destroying her forests. Eventually, however, she saw the disastrous effects of her recklessness, and gradually turned from destroying to restoring, and then to building up. For example, 100 years ago the southwestern corner of France, extending from Bordeaux to the Pyrenees Mountains, was almost as treeless as the prairie, and was fringed by sand dunes which were constantly in movement, burying fields and houses and even whole villages. Napoleon called in engineers and foresters. These men succeeded in holding the dunes in place by planting with maritime pine; and then they planted up

the whole interior of the region with the same tree. During the war this region was the largest source of lumber, not only for the French army, but for the British and American armies as well.

The French forests were, therefore, not simply nature's gift, but the fruit of conscious effort, applied with painstaking care and industry through long years.

Forestry to a Frenchman is the accepted way of handling forests. He cannot conceive of handling woodlands

timber that was ready to be cut, and even to sacrifice that which they would not normally have cut for ten or fifteen years. But they were firm against annihilating any forest, or cutting it in such a way that it could not recover with reasonable care. They, therefore, maintained absolute control over the methods of cutting. On the government owned forests, they were particularly strict, marking every tree to be cut and prescribing in detail the methods of brush disposal, etc. On private



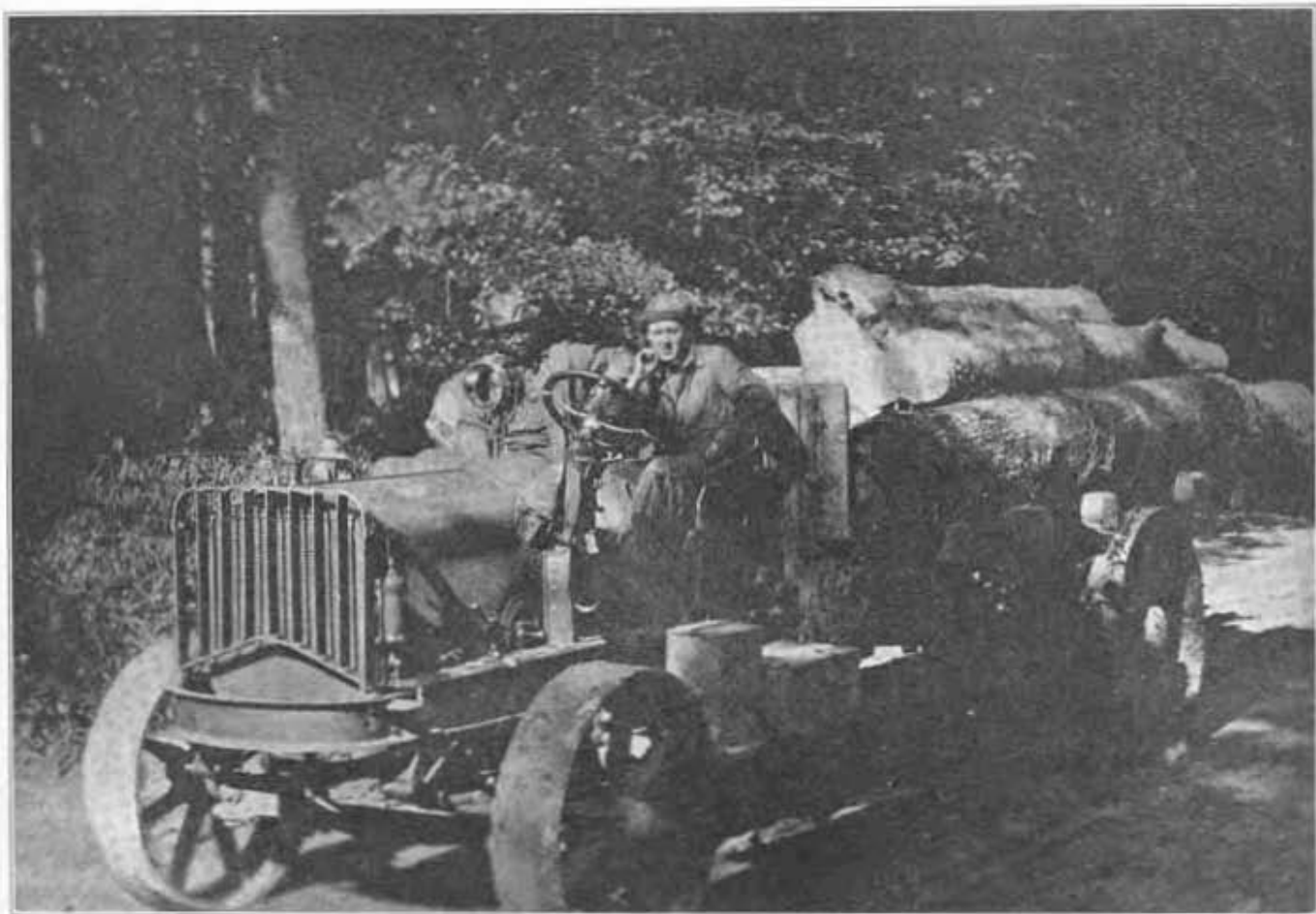
THE OFFICERS' ROW AT BELLEVUE CAMP, LANDES, FRANCE, THE FIRST CAMP OF THE AMERICAN FORESTERS AND LUMBERJACKS

in any other way. In France everybody, even those who are not foresters or lumbermen, understands what forestry means. When you say you are a forester you don't have to stop and explain as you do in America. It is just as clear as if you said you were a lawyer or a doctor. This universal understanding of the aims of forestry is the most potent factor in the upbuilding of the forest resources of any country. It is to the interest of the lumberman to have a perpetual supply of timber to cut; it is to the interest of the wood using industries to have a permanent source of raw material; and it is to the interest of the country as a whole to be independent of outside sources of supply.

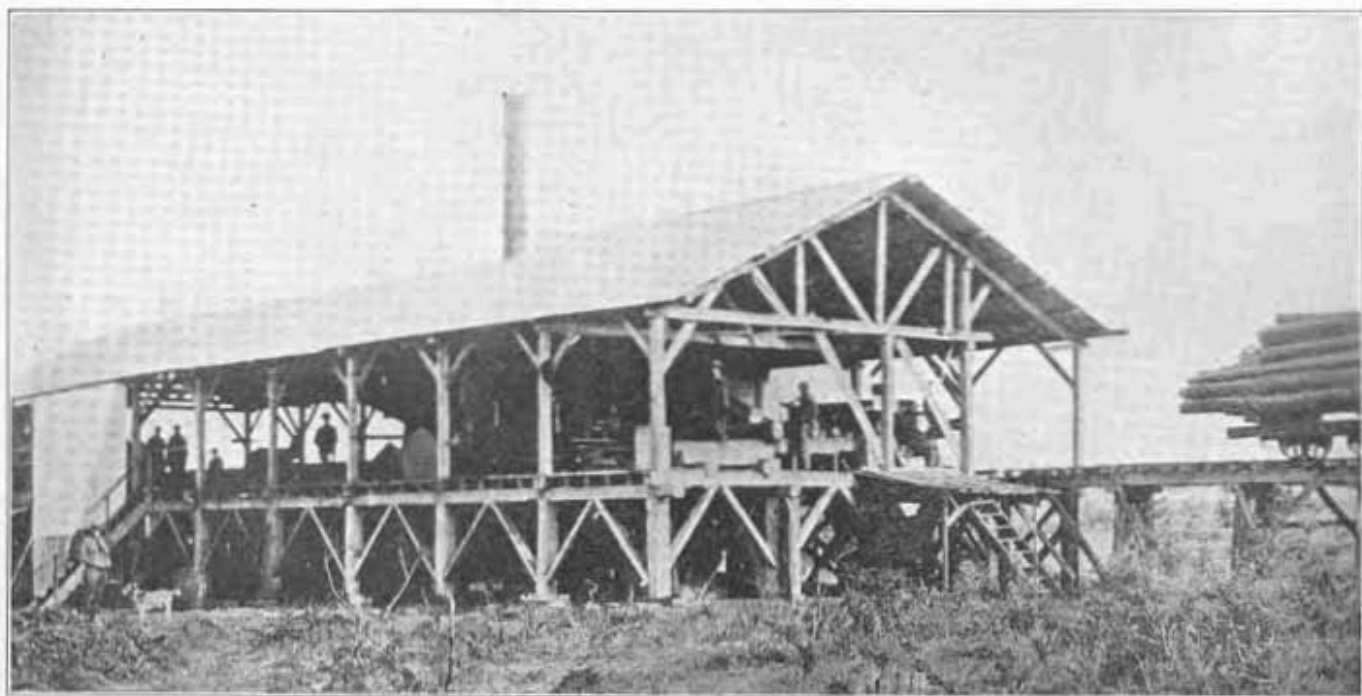
No wonder, then, that the French valued their forests, and were unwilling to have them needlessly destroyed. They did not forget the years of toil they had spent in creating them. They were willing to give up all the

lands the owner marked or designated in the contract those trees which he would sell. He also laid down the manner of brush disposal and other operations. Ultimate control was vested in a committee composed of representatives selected by the Minister of Agriculture, the Minister of Munitions as well as all other interested members of the cabinet, and representatives of the lumber industry. Under these conditions we had little choice as to methods of cuttings.

The operations were uniformly well carried out. The stumps were cut so low you could hardly see them; the tops were chopped into cordwood, and the slash thoroughly cleaned up. The cutting areas of the Canadians and Americans were generally better than those of the French wood merchants themselves. This goes to show that the lumberman can cut under forestry methods when he has to. He can do it even when subjected to the



LOAD OF HARDWOOD LOGS ON A WHITE TRUCK ON THE WAY TO ONE OF THE SAWMILLS OF THE 20th ENGINEERS



A 20-M AMERICAN SAWMILL OF THE 20th ENGINEERS. SOME OF THESE MILLS WORKED NIGHT AND DAY TO SUPPLY THE DEMANDS OF THE A. E. F. FOR LUMBER



LOAD OF LOGS WHICH HAS JUST BEEN LOWERED DOWN A STEEP INCLINE. THE CABLE BY WHICH THE CAR OF LOGS HAS BEEN LOWERED IS SEEN BETWEEN THE RAILS AT THE RIGHT.



INTERIOR OF 20th ENGINEERS SAWMILL IN FRANCE



CAMP OF A DETACHMENT OF THE 29th ENGINEERS IN SOUTHWESTERN FRANCE, SHOWING OLD STYLE FRENCH FARMHOUSE IN THE BACKGROUND

greatest imaginable pressure for quick production; and what is more, he does it well.

The organization of the American forestry section was patterned largely after that of the Canadian Forestry Corps. When Colonel Graves and I landed in France in June, 1917, we went first of all to the British Forestry Directorate at LaTouquet. Gen. Lord Lovat received us with the greatest friendliness, and gave us complete data which he had prepared in advance, covering his entire organization and equipment. Then, after a trip to the Canadian operations under Colonel Johnson on the government forest of LaJoux, in Eastern France, and after working over the information collected, we drew up a cable outlining the organization of the forestry troops required by the A. E. F. We based our requirements on an army of two million men, and asked for 18,000 forestry troops, of which 7,500 were to be skilled lumbermen, about 4,500 engineer troops for road and camp construction, and about 6,000 unskilled labor. At the same time we requested twelve officers to come over at once for overhead organization. These officers we asked for by name. They arrived in about two months, in time to be of great service in acquiring standing timber and other preparatory work. The unit of the Canadian Forestry Corps is the company. We made ours the battalion on account of our army regulations; it was hard at first to make our superiors see the need for elasticity. Forestry troops were an entirely new venture. The number of men in the actual operations depended entirely upon the needs of the case. Sometimes only 50 men would work together, and then again, we would have a thousand or more.

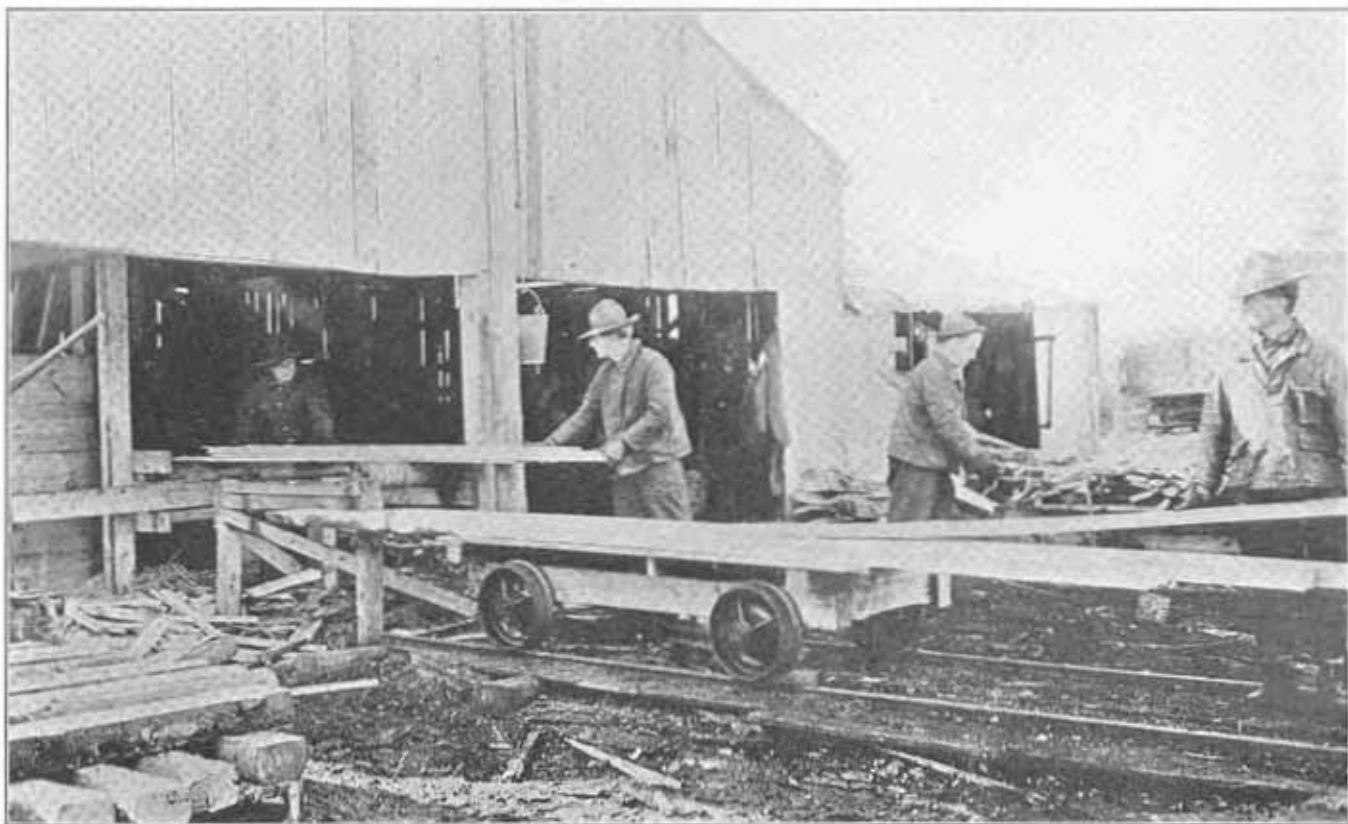
The standing timber was all bought through an inter-allied committee composed of French, British and Americans; later the Belgians were represented. We ourselves selected each forest, in company with a French officer, and then laid it before the committee. The negotiations with the owner, and purchaser, were done by the French. The French possessed the right of requisition, and used it effectively, saving millions of dollars and defeating the swarms of speculators which buzzed around us like flies around the honey pot. By persistent efforts we managed to acquire timber enough to keep ahead of the operations. But toward the end it was becoming more and more difficult to find reasonably accessible tracts. Accessibility was of prime importance in selecting timber, because of the need for rapid production. If the war had lasted, we would have been in a difficult position. When it ended, we were planning to do railroad logging in the mountains.

Logging conditions varied greatly. The southwestern pineries are as level as a table, except for the dunes along the edge. Central France is level or rolling, the chief obstacle being the heavy, sticky clay. Here the forests were mostly oak, which we cut into ties and road plank. The silver fir forests of Eastern France were in the mountains. Our chief trouble there was the narrow gauge railroads, which never had enough cars or engines. The same kind of narrow gauge railroads bothered us in other regions as well.

Last autumn, before the armistice was signed, our War Department planned to have four and a half million men in France by July, 1919. This meant an enormous increase in the lumber requirement. To meet it, we planned



UNLOADING LOGS FROM RAILWAY CAR AT AN AMERICAN SAWMILL



REMOVING LUMBER FROM TAIL END OF AMERICAN SAWMILL

to bring over 24,000 additional forestry troops, or a total of 42,000 men, 2,000 of which were to cut for the French and British. The men were already being recruited when hostilities ceased. Whether or not France could have furnished the timber for this force, as well as for the British and French armies, is difficult to say. Certainly we would have been hard put to it, and been compelled to operate some very difficult tracts.

We had to get ready cut lumber, ties, and piles for immediate needs pending the arrival of the forestry troops. We had to continue getting this class of material even after the arrival of the forestry troops, because the War Department increased the numbers of fighting men beyond what we had anticipated when we drew up the organization of the Forestry Section. The British and French helped us in this with wonderful generosity, giving us material from stocks sorely needed for their own armies. We developed to their utmost all European sources, Switzerland, Portugal, and even Spain. This

was so great that England cut down her importations of food to get tonnage to bring men over. The people went without sugar, they went without butter and other fats, they had almost no meat and a miserly slice of bread each day. They reduced themselves to the verge of starvation just to get a few more ships to bring soldiers to France. Had it not been for the forests of France, these ships, yes and even more ships, would have had to bring lumber instead of men.

We have seen, then, that wood is a military necessity, and that, owing to the shortage of ships, we could not have sent the necessary men and guns to France if there had not been the French forests to supply the wood. We have also seen that these forests are due to the efforts and industry of skilled foresters backed by the people.

In concluding, I wish to take this opportunity of expressing my profound admiration of the Canadian Forestry Corps, and deep appreciation of their generous and unflinching assistance. A finer lot of men I never hope



GENERAL VIEW OF ONE OF THE 20th REGIMENT SAWMILLS

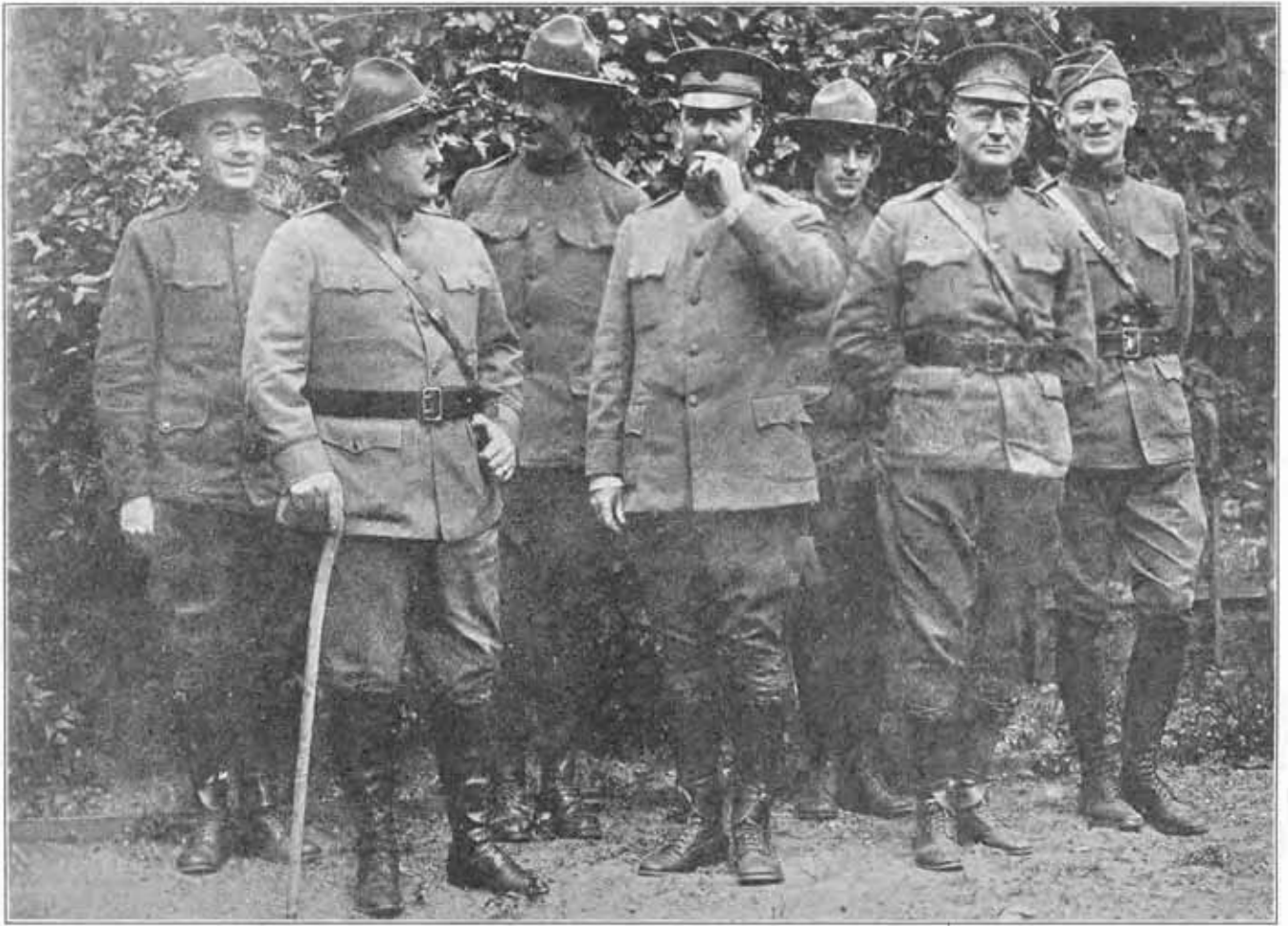
last was the work with which I personally was most concerned after the arrival of the forestry troops.

When we consider that the modern army is helpless without wood, I think it is safe to say that the French forests were one of the big factors in winning the war.

Had not the standing timber been in France to cut, it would have been useless to send forestry troops, and we would have been compelled to use precious tonnage in bringing the wood to our armies. We all know how critical the situation was during the German drives from March to July. Every man and every gun was needed. The drive in March was checked by a handful of men who had never fought before, laborers, camp cooks, any one who could hold a rifle. The need of men and guns

to meet. When Colonel Graves and I landed in Bordeaux in June, 1917, wholly ignorant of what lay before us, Colonel Miller, in charge of the Canadians in the region, called upon us and not only extended to us every courtesy but gave us much valuable information. I have already spoken of the assistance we received in drawing up our organization. Colonel White was particularly helpful with friendly counsel. When our forestry troops had arrived but were unable to commence sawing because our mills had not yet come, General MacDougal lent us five Canadian sawmills, three of 20,000-foot and two of 10,000-foot capacity, with full equipment. I feel that I speak for all the American lumbermen and foresters in France when I say that we can never adequately repay our debt of gratitude to the Canadians.





A GROUP OF OFFICERS OF THE 20th ENGINEERS (FORESTRY) IN FRANCE

*S.O. Johnson*

*W.B. Brackings*



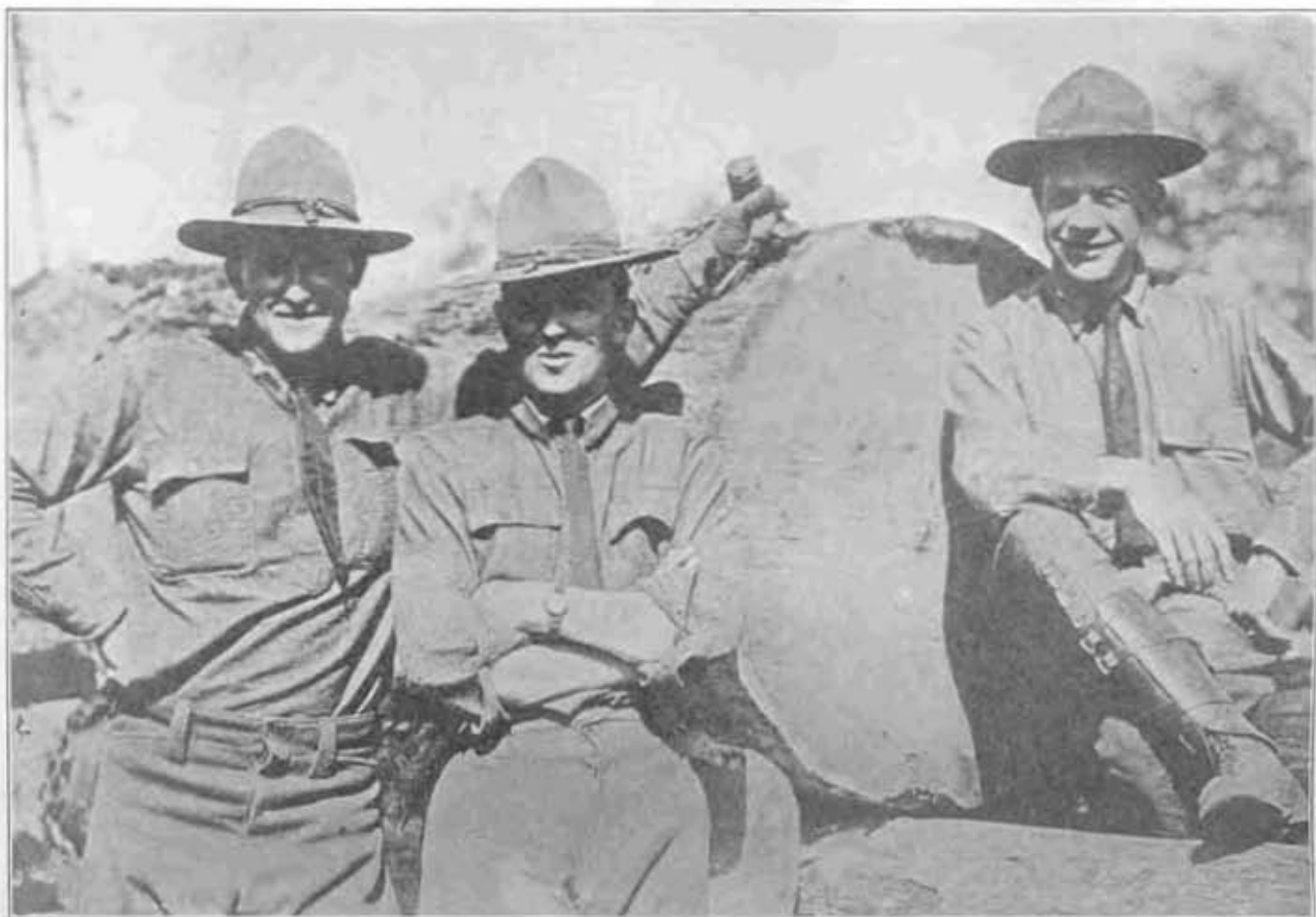
CAMP OF A DETACHMENT OF THE 20th ENGINEERS (FORESTRY) IN CENTRAL FRANCE



CAMP OF DETACHMENT OF 20th ENGINEERS IN FRANCE. CREW STARTING TO WORK



20th ENGINEERS IN FRANCE HAULING A SPRUCE TREE FULL LENGTH BY MEANS OF BIG WHEELS FROM WOODS TO MILL. OAK COPPICE AT THE SIDES OF THE ROAD.



OFFICERS OF THE 20th REGIMENT POSING FOR THEIR PHOTOGRAPHS AT A LUMBER CAMP IN FRANCE



THE AUREILHAN 20-M AMERICAN SAWMILL NEAR PONTENX, LANDES, FRANCE, SHOWING THE SYSTEM OF TRACKS UPON WHICH THE TIMBER AND LUMBER ARE REMOVED FROM THE MILL TO BE LOADED DIRECT TO THE BROAD GAUGE RAILWAY CARS



AMERICAN FORESTRY TROOPS CUTTING SPRUCE TREES IN A PARK IN FRANCE



A LOADED AMERICAN LOG WAGON ON ITS WAY FROM THE FOREST IN FRANCE TO A 20th REGIMENT SAWMILL



HAULING LOGS BY HORSE POWER FROM THE WOODS TO ONE OF THE 20th REGIMENT SAWMILLS IN FRANCE



LUMBER YARD. AT THE BOURICOS AMERICAN 20-M SAWMILL NEAR PONTENX, LANDES. MARITIME PINE FOREST SHADES THE CAMP IN THE BACKGROUND AT THE LEFT



20th ENGINEERS SAWING FELLED TREES INTO LOGS IN A PINE FOREST, SOUTHERN FRANCE



20th ENGINEERS LOADING FIR LOGS ON NARROW GAUGE RAILWAY CAR IN THE MOUNTAINS OF EASTERN FRANCE



AMERICAN LUMBERJACKS AND FORESTERS LOADING LOGS ON TO AMERICAN LOG WAGON IN CENTRAL FRANCE



23th ENGINEERS LOADING LONG PILING FOR SHIPMENT FROM EASTERN FRANCE TO BASE PORTS ON ATLANTIC COAST TO BE USED IN DOCK CONSTRUCTION



20th ENGINEERS SKIDDING AND PEELING POLES IN A FRENCH PINE FOREST IN SOUTHWESTERN FRANCE



LOADING FOREST PRODUCTS ON TO FRENCH RAILWAY CARS IN THE HARDWOOD FORESTS OF CENTRAL FRANCE





A 20th REGIMENT SAWMILL UNIT CAMPED IN A HARDWOOD FOREST IN CENTRAL FRANCE



LOG BOOM IN AUREILHAN LAKE IN THE LANDES, FRANCE. THE AMERICAN SAWMILL LOCATED AT THIS POINT MADE AN UNUSUALLY GOOD RECORD IN PRODUCTION AND SHIPMENT



BRINGING SPRUCE AND PINE LOGS INTO AMERICAN MILL IN FRANCE. LARGE HEAP OF SAWDUST RIGHT CENTER. SAWDUST SEEN COMING FROM THE BLOWER PIPE



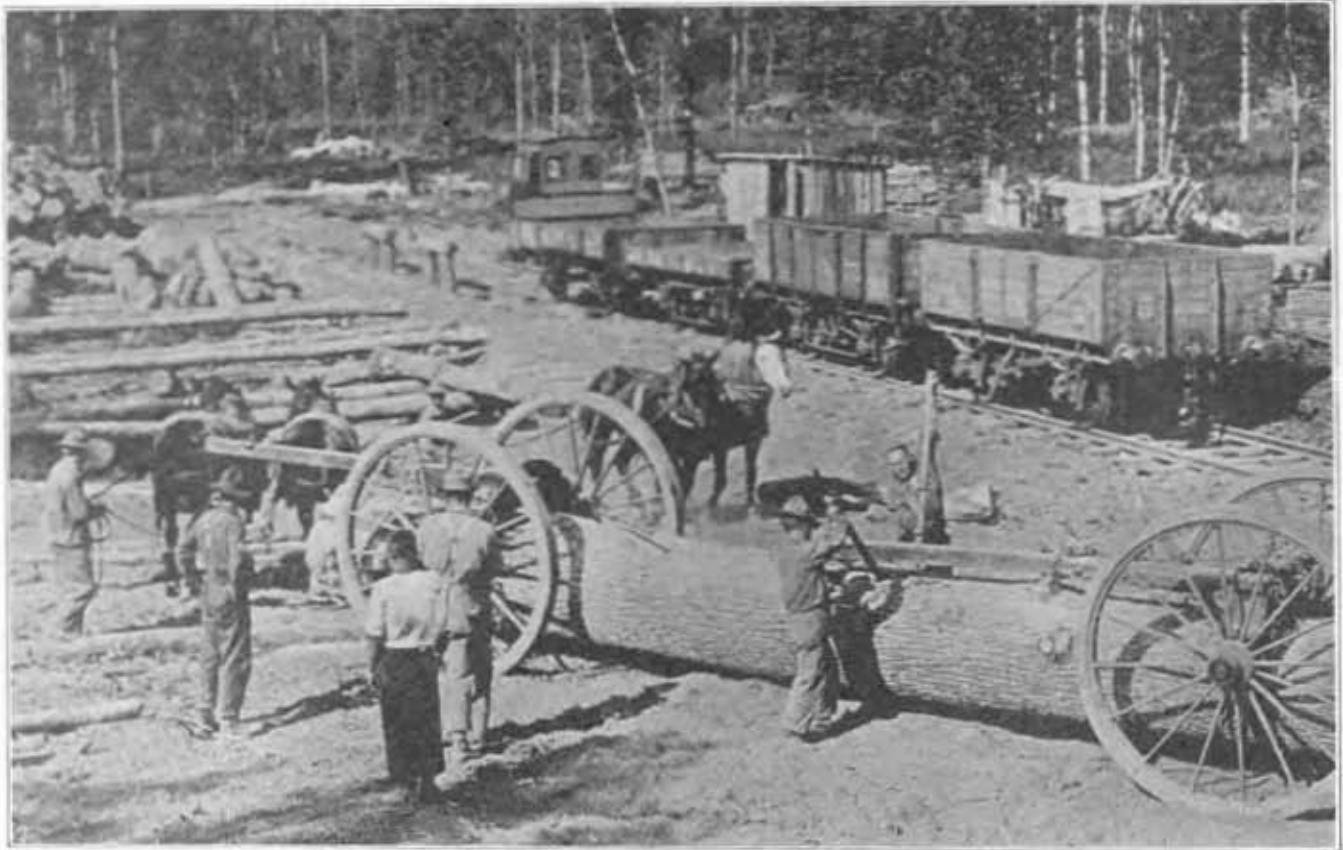
A LARGE LOAD OF MARITIME PINE LOGS ON A MOTOR TRUCK OF THE 20th ENGINEERS (FORESTRY) IN FRANCE



20th ENGINEERS LOADING LUMBER AND TIES ON FRENCH CARS. THE CAR AT THE LEFT IS LOADED WITH BARBED WIRE STAKES. THE BUILDING AT THE END OF THE RIGHT-HAND CAR CORRESPONDS TO AN AMERICAN CABOOSE



TYPE OF WAGON USED BY THE AMERICAN FORESTRY ENGINEERS IN FRANCE. NOTE THE SIZE OF THE LOAD



TWO PAIR OF BIG WHEELS USED TO BRING A LONG HARDWOOD LOG TO A MILL IN CENTRAL FRANCE



A LARGE SAWMILL OF THE 20th ENGINEERS CUTTING HARDWOOD LOGS IN FRANCE



LOADING SOME OF THE MANY THOUSANDS OF TIES MADE BY THE 20th REGIMENT MILLS FOR THE A. E. F. OPERATIONS IN FRANCE

*E. L. Lindsey*



A LARGE AMERICAN SAWMILL IN A FRENCH HARDWOOD FOREST



LOADING PEELED POLES ON TO RAILWAY CARS AT ONE OF THE OPERATIONS OF THE 20th ENGINEERS



THESE YOUNG LUMBERJACKS ARE THE TYPE OF SKILLED, ENERGETIC WORKERS WHO MADE RECORD PRODUCTION POSSIBLE



20th ENGINEERS LOADING FIR LOGS IN THE MOUNTAINS OF EASTERN FRANCE



UNLOADING SMALL LOGS AT AN AMEX MILL IN CENTRAL FRANCE. NOTE THE SPOUT THROUGH WHICH THE SAWDUST IS BLOWN TO LARGE SAWDUST PILE AT THE LEFT



MEMBERS OF THE 20th ENGINEERS LOADING PILING ON TRUCKS AT LANDING No. 2 IN FRANCE. THESE PILING ARE APPROXIMATELY SEVENTY FEET LONG



THIS WAS ERECTED BY THE 20th ENGINEERS NEAR ST. DIZIER AND SURPRISED THE FRENCH WITH ITS LARGE DAILY PRODUCTION, AS IN FACT DID ALL THE OTHER MILLS