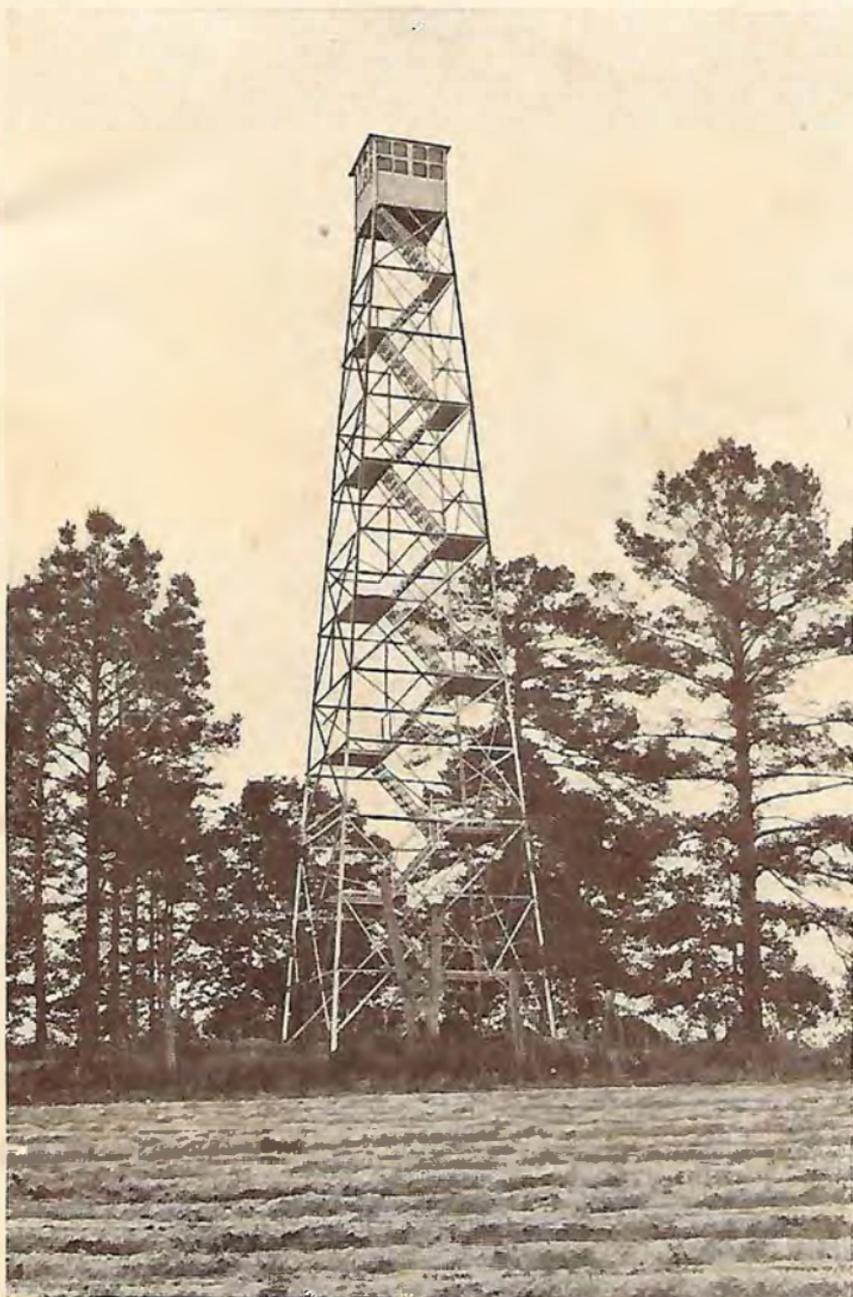


# FOREST SERVICE TOWERS



*Photo by Department of Conservation and Development, North Carolina*

**AERMOTOR COMPANY**

**2500 Roosevelt Road, CHICAGO, U. S. A.**

## FOREWORD

**T**HE TOWERS shown in this booklet have become deservedly popular. They were designed to meet the need for permanent and substantial structures to provide shelter and security for the observer and his instruments, and capable of resisting fire and storm.

These towers are being used in constantly increasing numbers by our National and State Governments for the protection of our forests, and by the large lumber companies for the preservation of their timber. They are also excellent observation towers for public resorts.

All Aermotor towers are galvanized by the hot process after the work of fabrication has been finished. Aermotor galvanizing is the best that can be done. The coating of zinc is unusually heavy and uniform and every part of the towers is perfectly protected from rust.

**80-FOOT TOWER, TYPE LS-40**  
**OUACHITA PARISH, LOUISIANA**



*Photo Courtesy The Brown Paper Mill Co., Inc., Monroe, La.*

**T**HE LONG EXPERIENCE which we have had in designing and building galvanized steel towers for a great variety of uses enabled us to produce this line of towers exactly suited to observation and fire protection purposes. They are strong enough to stand safely in exposed locations and yet are not so heavy and expensive as to be excessive in cost. In fact, these towers have been so skillfully designed, and our facilities for making them are so excellent, that they are very moderate in price.

The outstanding feature of the LS-40 type of tower is the inside stairway with its frequent landings and continuous guard rails. The stairs are two feet wide, with 10-inch treads and 9-inch risers. The platforms are of good, heavy lumber, painted one coat before shipping, and are made up ready to put in place.

The house at the top of the tower is seven feet square and six feet nine inches high to the eaves. The galvanized roof is made in four sections so that it is easily put in place from the inside of the house. The lower part of the house is enclosed with galvanized steel sheets. The upper part has two windows on each side, one of which is bolted permanently in place, while the other is hung so as to swing wide open. We furnish all material required for erecting the towers complete except the glass for the windows. Because of the danger of breakage we think it advisable for the purchaser to supply the glass and have the glazing done when the towers are erected.

Entrance to the house is made through a trap door in the floor. This door is hinged and is made in two sections so that it is easy to open and close.

All steel parts are thoroughly galvanized by the hot process after all work of manufacture has been completed except the bolts and nuts are threaded after galvanizing.

The LX-25 Type of tower, has a steel ladder in place of the stairway. It is a lower priced tower which is quite safe and easy for a man to climb.

Where the tower is to be used exclusively by the observer, the LX-24 Type, affords a very economical and satisfactory structure. It is ascended by a steel ladder on the outside of the tower and is entered from a landing platform just beneath the house.

## 60-FOOT TOWER, TYPE LS-40

Known as "BOOT JACK TOWER"

Erected in ELK COUNTY, PENN.



*Courtesy Pennsylvania Department of Forests and Waters*

THIS is one of many similar towers purchased of us by the Commonwealth of Pennsylvania.

**I**N SELECTING an observation tower the price is not the only thing to be considered. One of these towers will stand for a lifetime and no care or reasonable expense should be spared to make it most serviceable and useful for the purpose which it is to serve. The I.S-40 type of tower is placed first in the list on the opposite page because these towers are the most complete and satisfactory observation towers obtainable. They meet every requirement of a fire tower or small observation tower.

The purchaser may easily make a mistake unless the probable future use of it is well considered. One of our earliest tower customers bought a few of the Type LX-24 towers for use in remote regions, thinking that only the observer would ever climb them. Now, with improved roads, visitors are frequently clamoring for the privilege of climbing these towers which are not suitable except for men who are experienced climbers. All of their later towers have been of the I.S-40 type with the inside stairs.

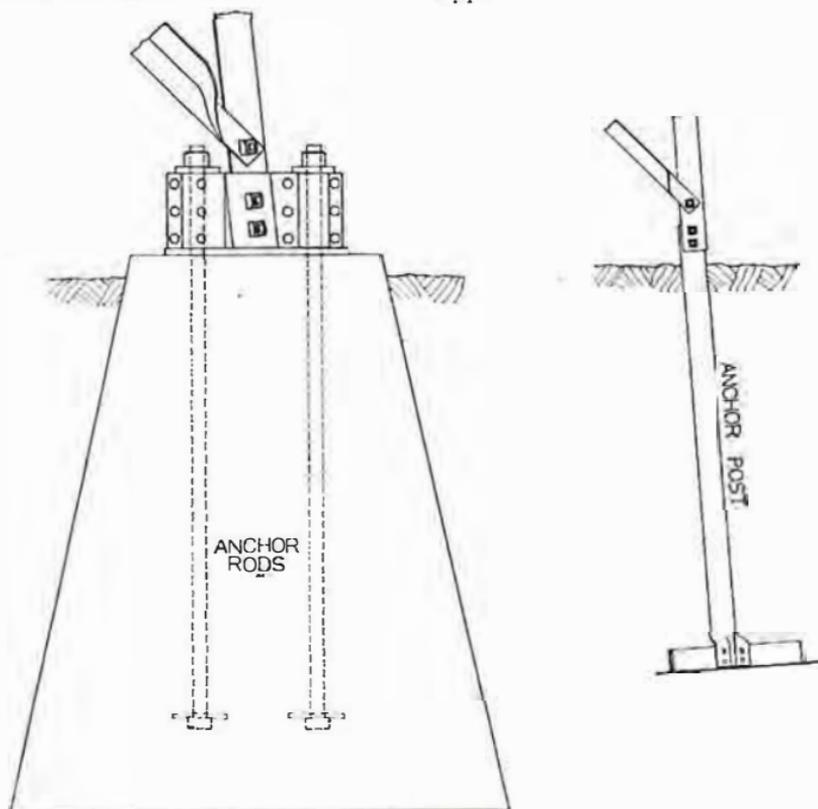
Another customer started with a tower which was a modification of our windmill tower. A change was soon made to the LX-24 type, and later to the LX-25 type. We predict that they will next adopt the I.S-40 type so that the towers may be freely thrown open to the public. People do not like to stand at the foot of a tower and look up. They want to get on top of it and look out. Interest in the work of the foresters is greatly enhanced when people have a chance to see for themselves the scope and effectiveness of it.

### ANCHORAGE

We regularly furnish with these towers galvanized anchor rods 5 feet long for imbedding in concrete piers. When the towers are to stand on solid rock we will furnish anchor bolts 3 feet 6 inches long if preferred.

Where the ground can be easily excavated to a depth of five feet, angle steel anchor posts can be used at some saving in the expense of the foundations.

Orders should specify the type of anchorage desired. If this is not done the 5-foot Anchor Rods will be shipped.





## 60-FOOT TOWER, TYPE LS-40

Erected on SOUTH MOUNTAIN  
ALLEGANY STATE PARK, NEW YORK

BELOW we give extracts from the letter of the Allegany State Park Commission which accompanied the photograph from which the above illustration was made.



“The base of this tower is 2375 ft. above sea level and from the observation room nearly the entire Park area (65,000 acres) can be seen.”

“This tower has been of immense value to us this past spring in quickly locating forest fires both in and out of the Park area.”

## 60-FOOT TOWER, TYPE LS-40

LONG RIDGE FIRE TOWER  
LONG RIDGE, LYCOMING COUNTY, PENNSYLVANIA

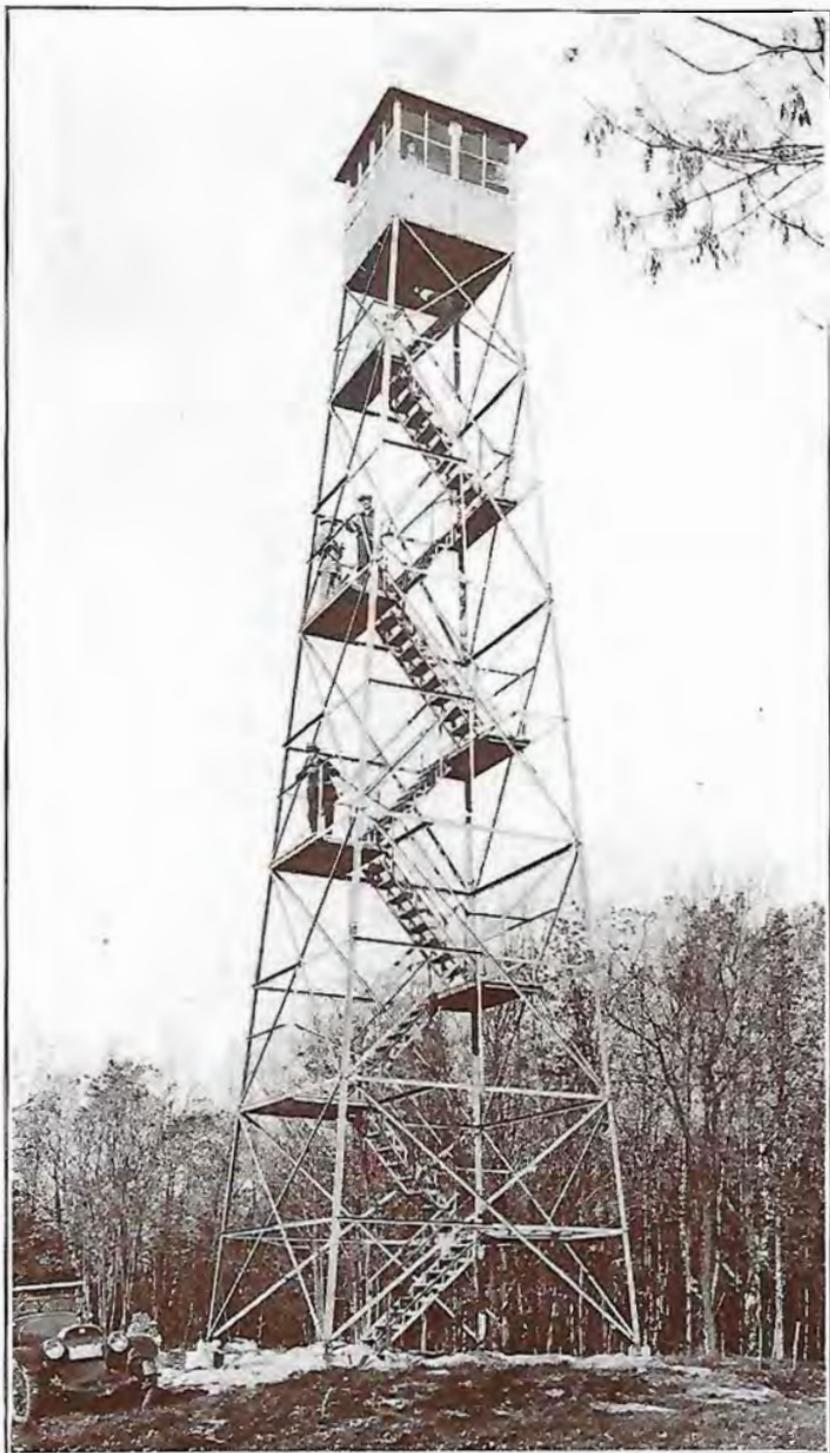
THIS TOWER, standing in an exposed location on the summit of a ridge, has stood the storms of many summers and the gales of many winters. Aermotor towers are towers of strength.



*Courtesy Pennsylvania Department of Forests and Waters*

ONE CANNOT travel far over the beautiful mountain roads of Pennsylvania without coming upon one of these guardians of their forests. The view from the top of these towers is always interesting.

**60-FOOT TOWER, TYPE LS-40**  
Erected in RENSSELAER COUNTY, NEW YORK



*Courtesy Conservation Commission, State of New York*

THE FREQUENT landings and the well-guarded stairs make this tower quite safe for anyone to climb.

## THE GUARDIAN OF THE FOREST

**T**HIS picture shows the observer on duty. Secure within his strong, steel cabin, with his glasses in hand and the telephone at his shoulder, he is ready to give immediate warning the instant he sights a suspicious trace of smoke. Vast sums of money and thousands of acres of valuable forest are saved each year by these faithful guardians of our natural resources.



*Courtesy Conservation Commission, State of New York*

The house on the top of these towers affords shelter from the sun, protection from storms and ample room for the observer and his instruments. Entrance to the house is thru a trap door in the floor which is closed when the observer enters so that the entire enclosure is available for his use. One window on each side is hinged so as to swing wide open for ventilation when desired.

**60-FOOT TOWER, TYPE LS-40**  
**SHAWNEE STATE FOREST, SCIOTO COUNTY, OHIO**  
**Known as "COPPERHEAD HILL FIRE TOWER"**  
**Erected in 1924**



*Courtesy Department of Forestry, State of Ohio*

THE STATE of Ohio is not usually thought of as a forest state, but the Department of Forestry has already bought several of these towers for the conservation of its wooded areas. Where forests are limited in extent it is all the more important to protect them.

## 60-FOOT TOWER, TYPE LS-40

### THE SMITH PLACE FIRE TOWER CLEARFIELD COUNTY, PENNSYLVANIA

THIS PICTURE shows quite clearly the arrangement of the stairs and landings. The stairs are easy to ascend and the landings are amply large. There are hand railings and guards all the way up.



*Courtesy Pennsylvania Department of Forests and Waters*

THESE TOWERS have been designed to make the work of erecting as simple and easy as possible. The stairs are all alike so that they fit in any section of the tower. All parts are made from templets or patterns and fit accurately in their place. All connections are bolted.

## 47-FOOT TOWER, TYPE LS-40

Erected in AROOSTOOK COUNTY, MAINE



*Courtesy Forest Service, State of Maine*

NOT A TREE in sight here, but from the top of the tower vast forest areas can be seen.

**60-FOOT TOWER, TYPE LS-40**  
**PILOT KNOB FIRE TOWER**  
**DEAN STATE FOREST, OHIO**



*Courtesy Department of Forestry, State of Ohio*

THIS PICTURE was taken when the Ohio State Forestry Association visited the tower. Every member of the association must have been impressed with the utility of our steel towers for forest protection.

## 60-FOOT TOWER, TYPE LS-40

"HAYS LOT TOWER"

JEFFERSON COUNTY, PENNSYLVANIA

WHEN TOWERS are erected in remote places it is desirable to provide a suitable ground cabin for the observer. The one shown here seems to be well built, cozy and comfortable. Various types of cabins are shown in this booklet.



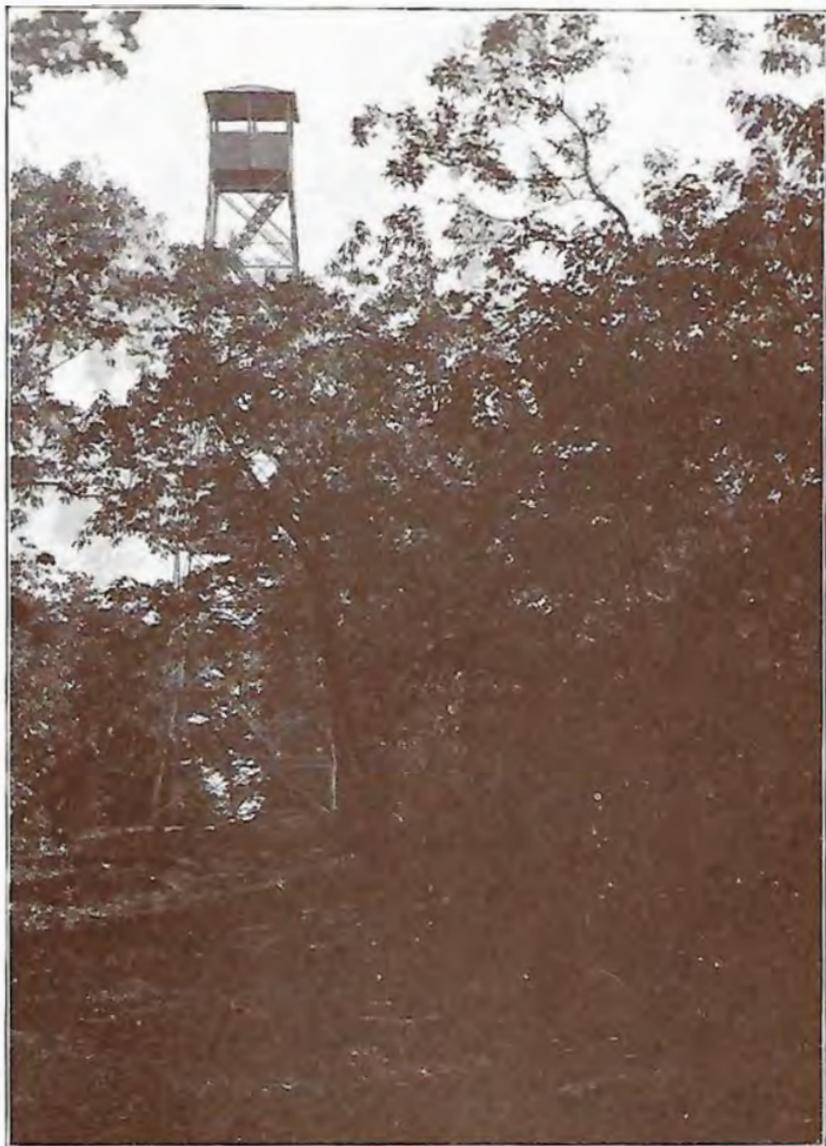
*Courtesy Pennsylvania Department of Forests and Waters*

THE QUALITY of the galvanizing is one of the important features of Aermotor towers. The coating of zinc on our towers is unusually heavy and completely covers the steel. There are no bare spots to rust and weaken the tower. Superior galvanizing adds many years to the life of a structure which is constantly exposed to the weather.

## 60-FOOT TOWER, TYPE LS-40

Erected in POUNDRIDGE RESERVATION  
WESTCHESTER COUNTY, NEW YORK

PEOPLE LIKE to get up where they can look out. Nothing is so popular in a public park as a tower which anyone can climb with a feeling of security.



*Courtesy Westchester County Park Commission*

WHEN IN doubt as to the height of tower required it is a good rule to use one a little higher than you think is necessary. Trees grow higher but towers do not, and it is much more expensive to raise the tower higher after it is up than to get the needed height in the beginning.

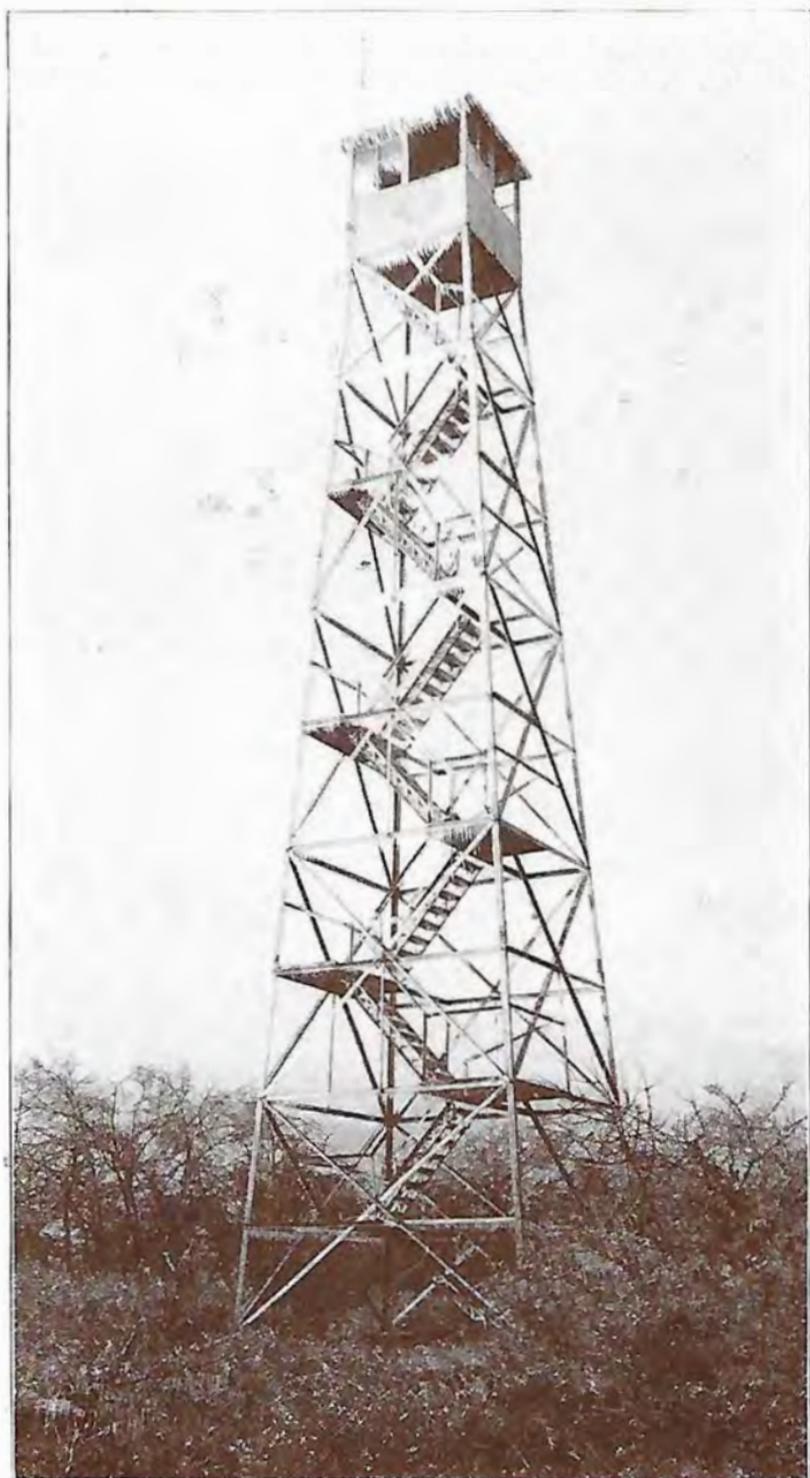
**60-FOOT TOWER, TYPE LS-40**  
**"PALESTINE TOWER"**  
**CUMBERLAND COUNTY, NORTH CAROLINA**



*Courtesy Department of Conservation and Development, North Carolina*

IN THIS picture the top of the foundations, and the footing for the bottom section of the stairs, are clearly shown.

**60-FOOT TOWER, TYPE LS-40**  
**PALISADES INTERSTATE PARK**



THIS PICTURE was taken after a severe ice storm. The tower stood unharmed except some broken glass.

## 80-FOOT TOWER, TYPE LS-40 KIRBYVILLE, TEXAS

IN SOME localities, where the trees grow tall and the ground is level, high towers are required to give the desired range of vision.



*Courtesy Texas Forestry Department*

THIS PICTURE is not as clear as could be desired, but it gives a very good idea of the height of an 80-foot tower. From the top of this tower the observer can see a long distance.

## 73-FOOT TOWER, TYPE LS-40

### "THE TANNER TOWER"

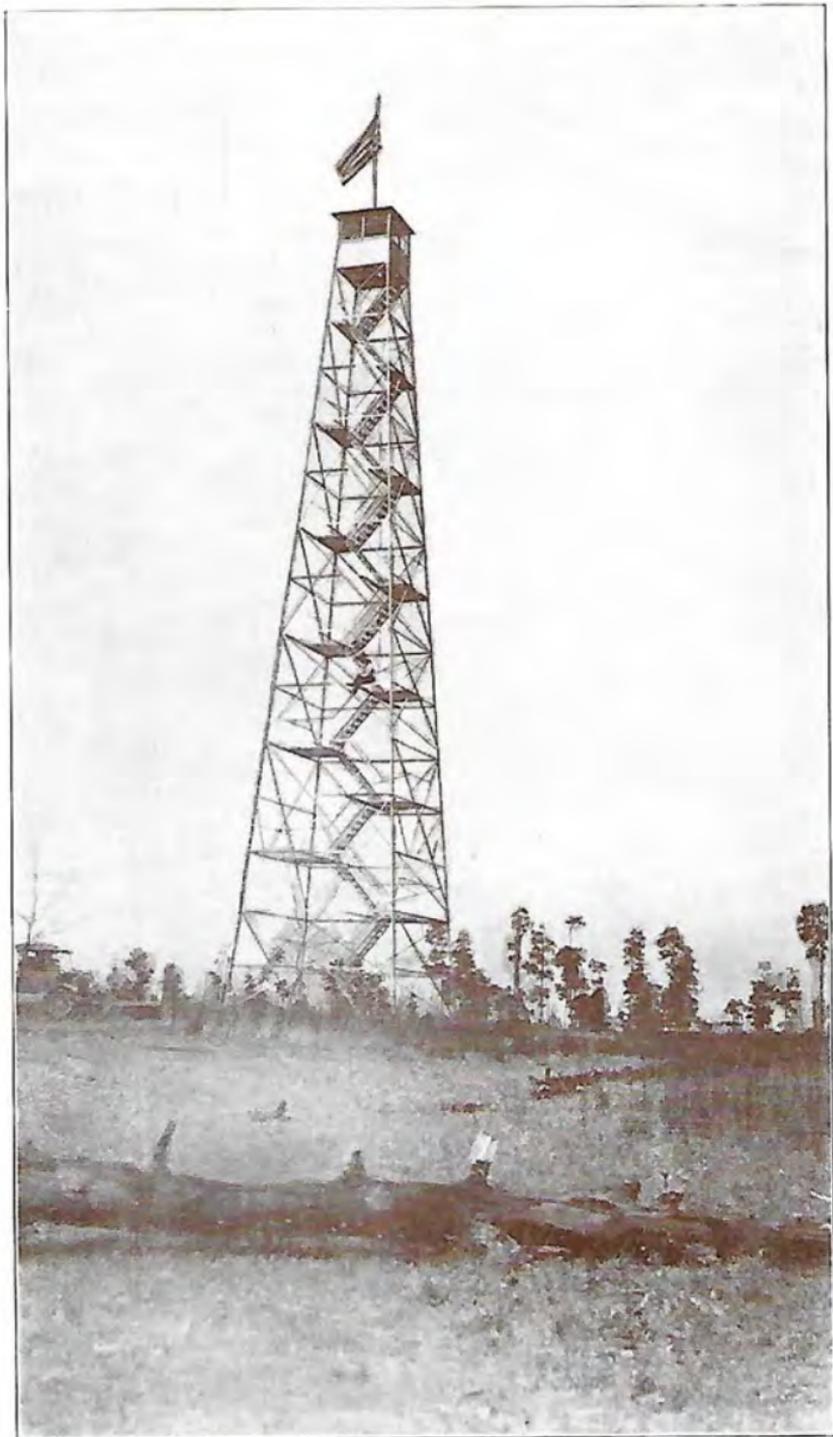
THIS TOWER stands on the summit of Meenahga Mountain on the grounds of The Adirondack-Florida School, Onchiota, N. Y. It was erected as a memorial to Gordon Tanner who helped to build the first wooden lookout tower on this site.



THE TANNER TOWER has had many pilgrimages made to it since its erection in 1927. The school gives tower parties to which neighbors and friends are invited. The view from the top is said to be superb.

## 93-FOOT TOWER, TYPE LS-40 HARRISON COUNTY, MISSISSIPPI

THIS TOWER has a galvanized steel flag pole on the peak of the roof.



*Courtesy Commission of Forestry, State of Mississippi*

STEEL FLAG POLES are supplied with any towers of this type for a small extra charge.

## 47-FOOT TOWER, TYPE LS-40

### GUILFORD TOWER

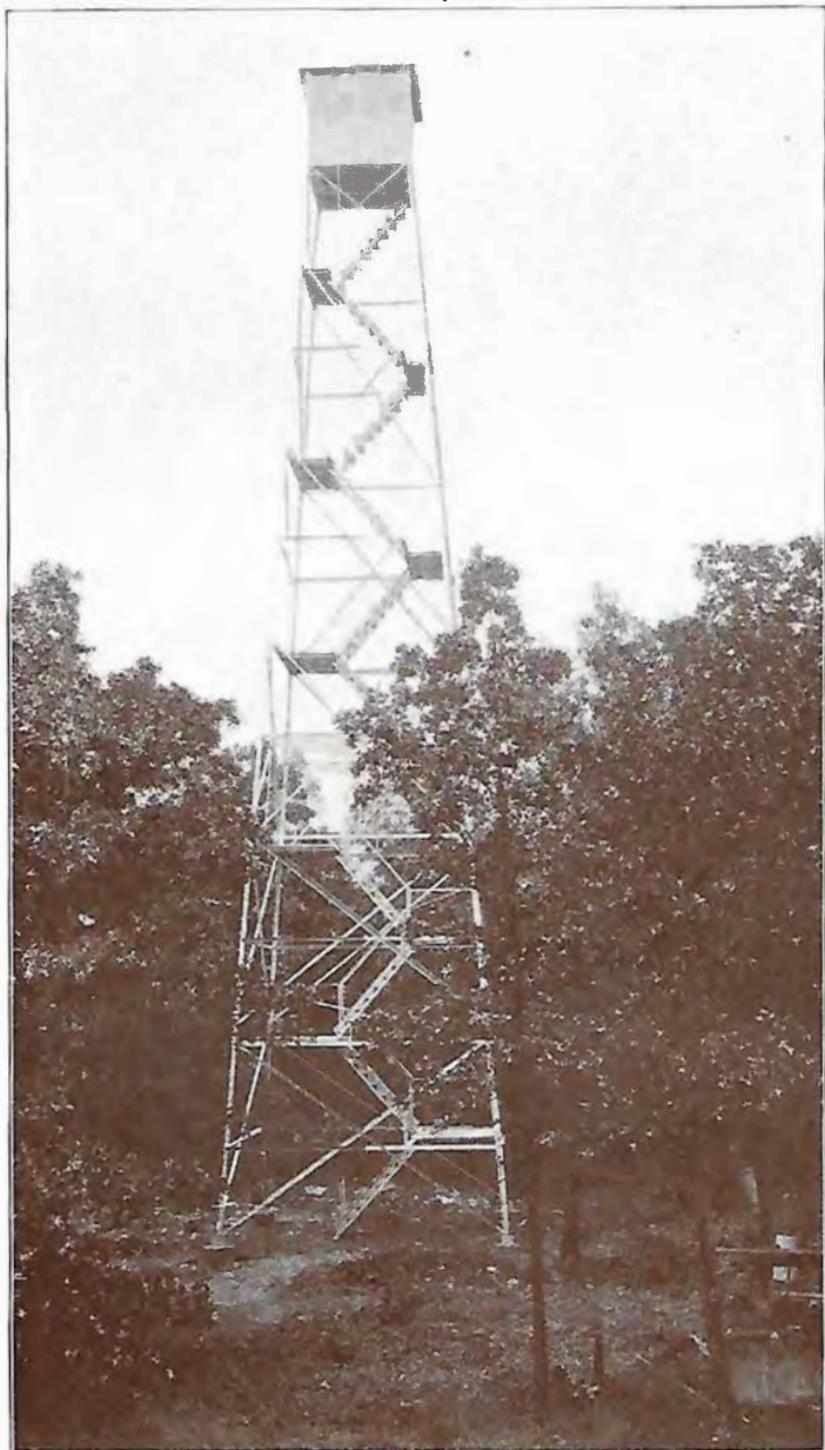
Erected on BUFFHEAD, GUILFORD, CONN.



*Courtesy Connecticut State Park and Forest Commission*

IN THESE towers utility, durability and pleasing design are combined at very moderate cost.

**73-FOOT TOWER, TYPE LS-40**  
**A Watch Tower in INDIAN TRAIL STATE PARK AND**  
**GAME REFUGE, MISSOURI**



*Courtesy Chief of Parks and Refuges, Missouri*

IN THIS location a tall tower was necessary to get above the surrounding trees.

## 93-FOOT TOWER, TYPE LS-40

### THE BRANDYWINE FIRE TOWER

The following extracts are from the *Southern Maryland Times*:

"THE BRANDYWINE tower serves for forest fire detection for an area of approximately thirty miles in diameter. Washington Monument (in Washington) can be plainly seen from the tower on a clear day. A lookout watchman has been stationed in the tower since its erection. A "smokechaser," to quickly investigate all smokes which are detected, has also been stationed there."



*Courtesy Maryland State Department of Forestry*

"Within the radius of the tower are about twenty-five forest wardens who also serve in fire suppression work. When detected, fires are reported to the nearest warden, who takes immediate steps to suppress it."

"This tower is the tallest forest fire lookout tower in the State. It was erected by the State Department of Forestry in cooperation with the Board of County Commissioners of Prince George's and Charles Counties, and the Gladfelter Paper Company. Visitors are welcome to use this tower for sightseeing purposes."



## 60-FOOT TOWER TYPE LS-40

Known as  
**SPRING MOUNTAIN  
TOWER  
WEST VIRGINIA**

THE CASUAL visitor likes to pause at every landing and take in the constantly enlarging field of beauty.

*Photos Courtesy Chief Forest  
Firewarden  
State of West Virginia*

## 73-FOOT TOWER TYPE LS-40

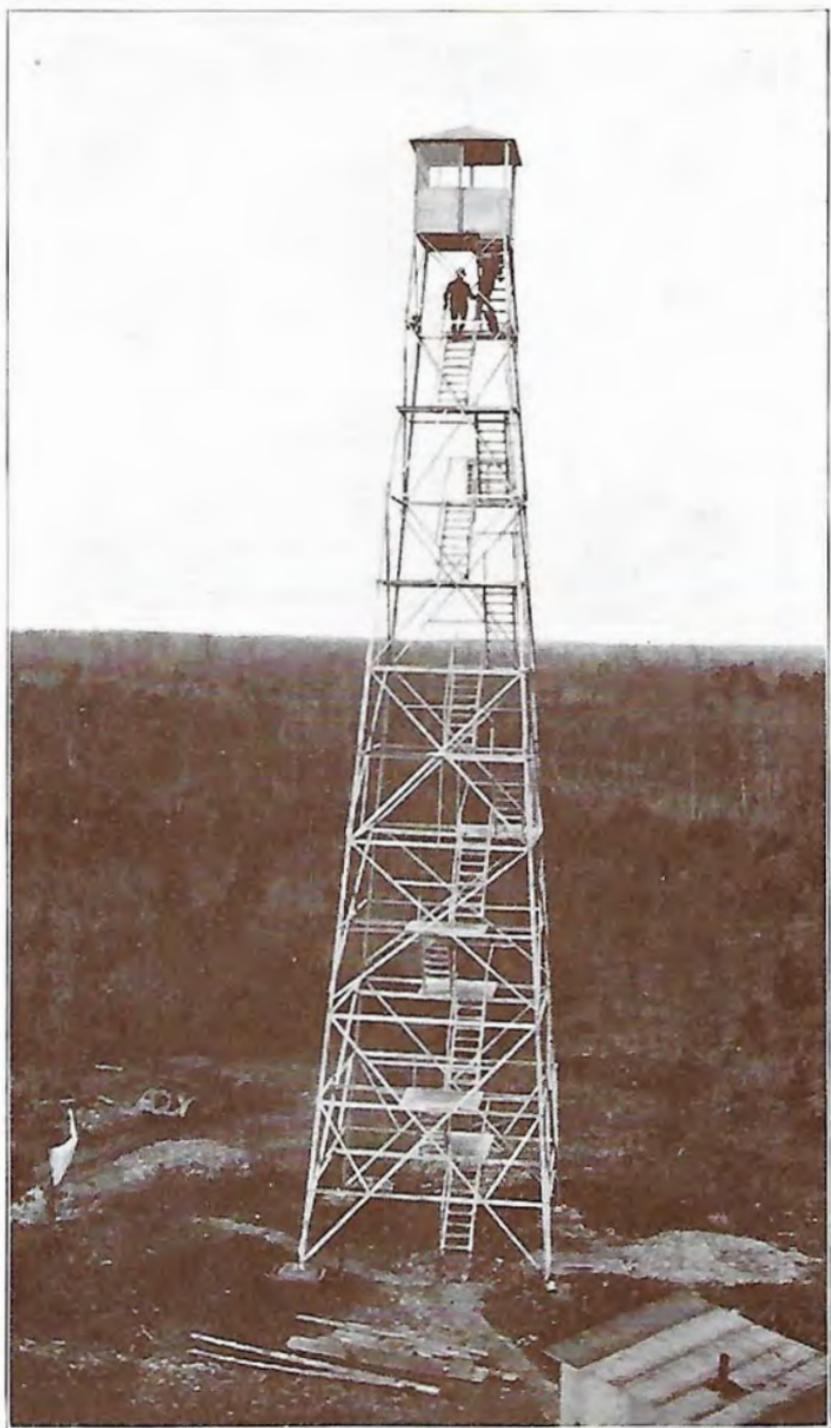
**BLAIR  
MOUNTAIN  
TOWER  
LOGAN  
COUNTY  
W. VA.**

A 73-FOOT tower on the summit of a mountain places the observer on the top of the world. Just try to picture the beauties of a sunrise or sunset from the top of this tower.



## 80-FOOT TOWER, TYPE LS-40

THIS PICTURE was taken as the erection is being finished. Men work on these towers with a feeling of security because the stairs and landings are always just below them.



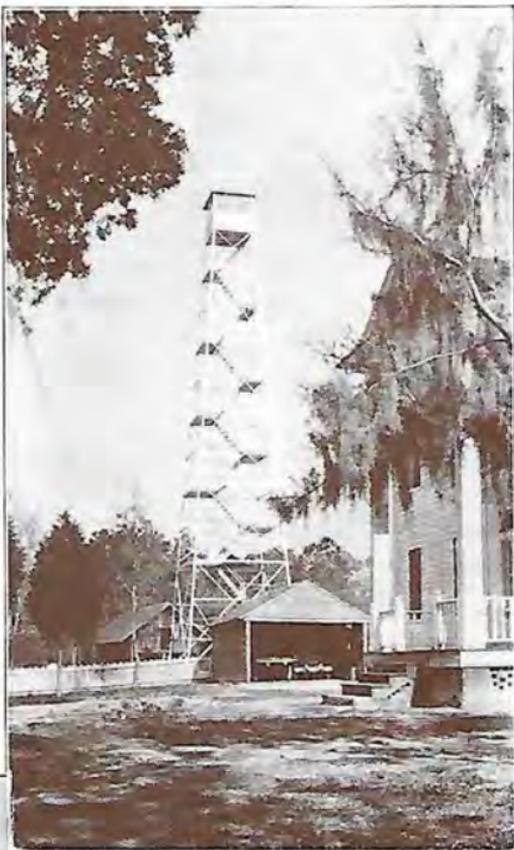
*Courtesy Forest Service, State of Virginia*

THIS PICTURE was taken from an elevation and gives an unusual view of one of these high towers.

## 80-FOOT TOWER TYPE LS-40

PENDER COUNTY  
N. CAROLINA

THESE TOWERS are usually erected in places remote from any dwelling. They are so pleasing in design and appearance that there could be no objection to their location close to a nice hotel or private residence.



## 35-FOOT TOWER TYPE LS-40

CALDWELL  
COUNTY  
N. CAROLINA

TO SIMPLIFY manufacture and erection, these towers are made only in standard heights in which the upper sections are all alike. This 35-foot tower is just like the top 35-foot section of the 80-foot tower above.

*Photos Courtesy  
Department of Conservation  
and Development  
State of North Carolina*

## 47-FOOT TOWER, TYPE LS-40

WHEN MOUNTAIN peaks provide the elevation, short towers meet the requirements.

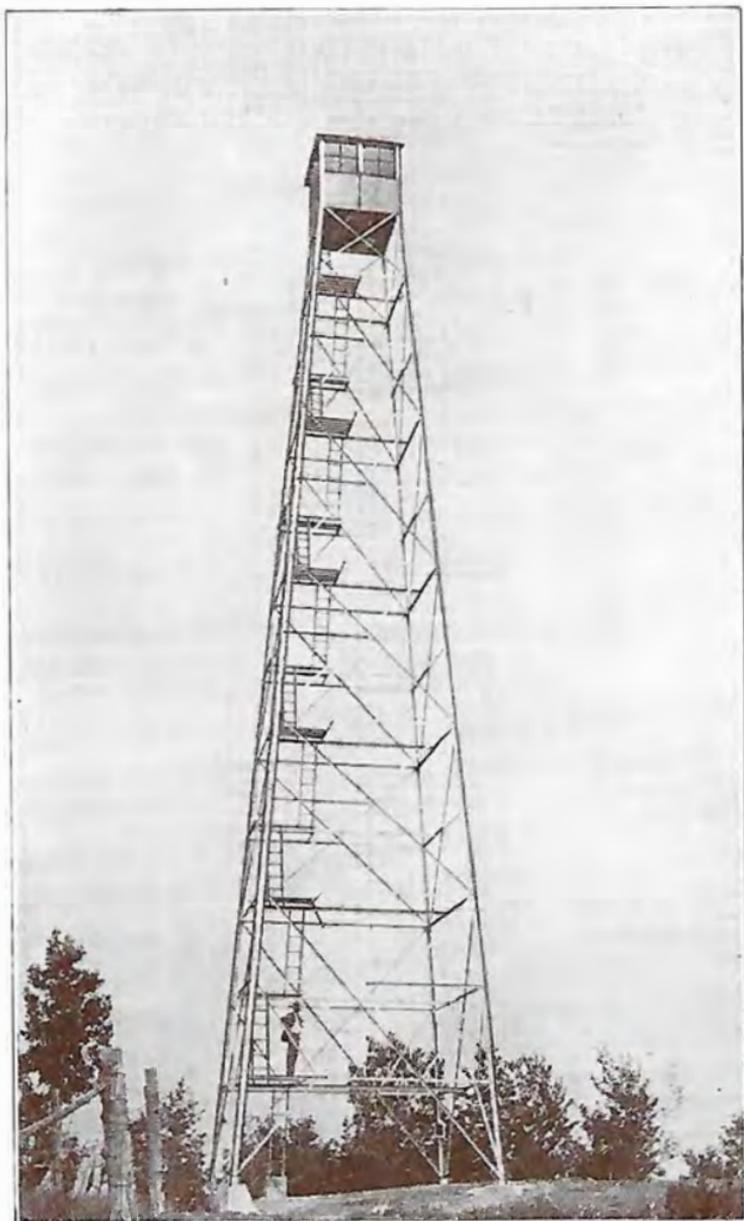


*Courtesy Forestry Department, State of New Hampshire*

THESE TOWERS are shipped completely knocked down in bundles of a size which can be easily transported over mountain roads into a rugged region like this.

## 80-FOOT TOWER, TYPE LX-25 SUPERIOR NATIONAL FOREST, MINNESOTA

THIS TOWER has substantial galvanized steel ladders with landing platforms every seven feet. The ladders are staggered so that the hand naturally takes hold of the ladder above as the observer comes up to the landing. This gives a feeling of security which is very satisfactory to the tower man.



*Courtesy U. S. Forest Service*

THESE TOWERS have been made as simple in design as possible. They are easily erected by inexperienced men. The corner posts are in sections 13 feet eight inches long, and the other parts are of convenient lengths for hauling or packing. Part numbers are stencilled on each piece or bundle and blue prints are supplied showing the location of every member of the tower.

## 47-FOOT TOWER TYPE LX-25

"NEALY RIDGE TOWER"  
DICKENSON COUNTY, VIRGINIA



ERECTED by Clinchfield Coal Corporation and W. M. Ritter Lumber Company in cooperation with the Forest Service of Virginia and the United States Forest Service.

## 75-FOOT TOWER, TYPE LX-24

Erected in WEXFORD COUNTY, MICHIGAN

Aermotor towers of this type are found all over the forest regions of Michigan



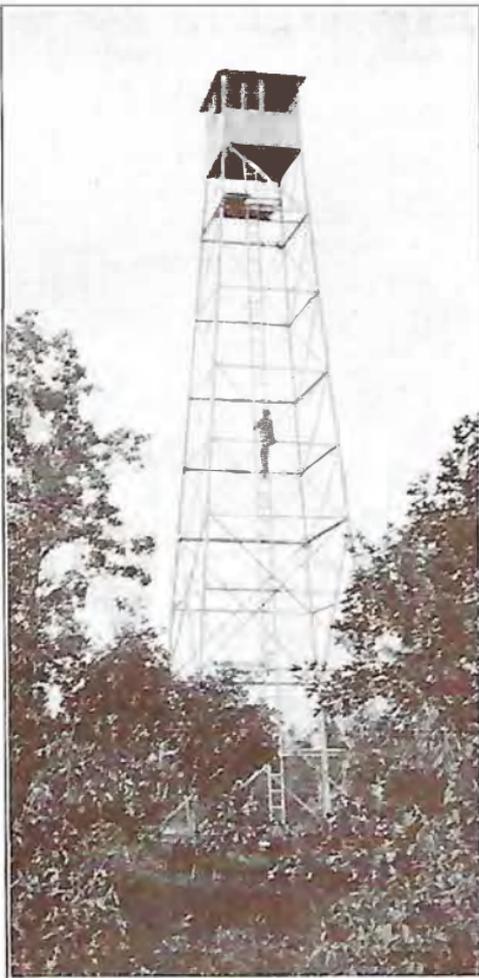
*Courtesy Department of Conservation, State of Michigan*

A SUBSTANTIAL steel ladder on the side of the tower extends up to the landing platform just below the house which is easily entered thru a trap door in the floor.

**60-FOOT  
TOWER  
TYPE LX-24**

**SILVER CREEK  
LOOKOUT TOWER**

**Michigan  
National Forest**



*Photos by  
U. S. Forest Service*

**80-  
FOOT  
TOWER  
TYPE  
LX-24**

**LONG  
LAKE  
TOWER**

**Michigan  
National  
Forest**



## 60-FOOT TOWER, TYPE LX-24

Erected in MEDICINE BOW NATIONAL FOREST, WYOMING



*Photo by U. S. Forest Service*

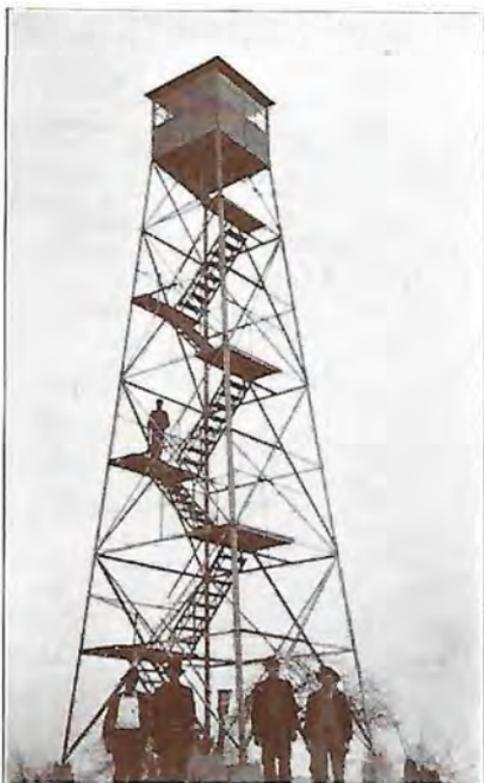
THIS TOWER is fitted with our galvanized steel Ladder Enclosure for the safety of the climber. It can be attached to any of the towers of this design at small additional expense.

## 47-FOOT TOWER TYPE LS-40

Erected on  
**WILLIAMS HILL**  
**WEST VIRGINIA**

THE FORESTS of West Virginia are well protected by towers of this type.

*Photos Courtesy Chief Forest  
Firewarden, State of  
West Virginia*



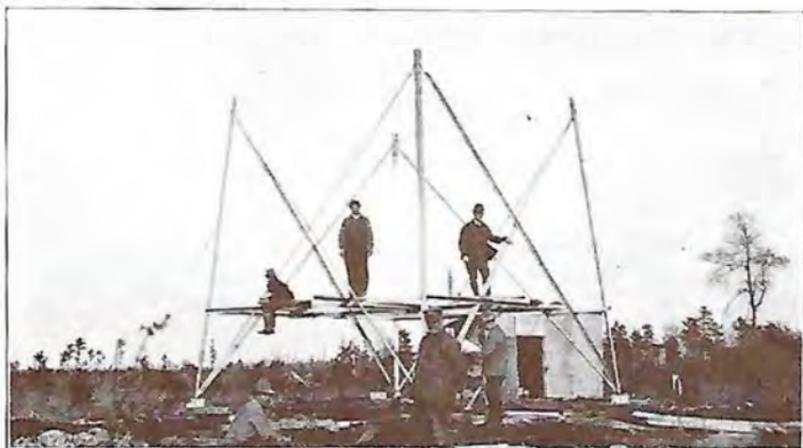
## 73-FOOT TOWER TYPE LS-40

Erected in 1927  
near  
**PUTNEY,**  
**W. VA.**

Known as  
**MT. DESERT**  
**TOWER**

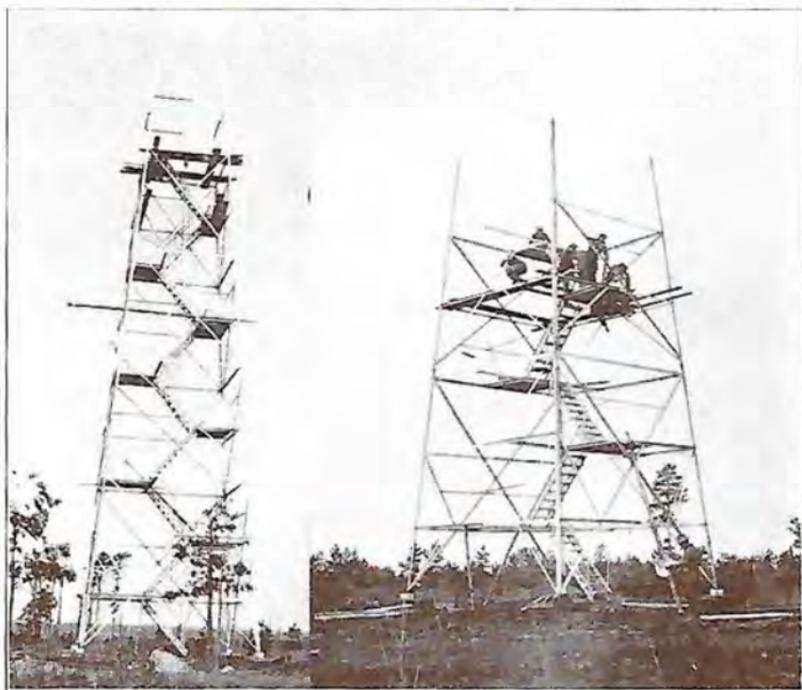
THE OBSERVER'S comfortable cabin is shown in the background.

## ERECTING TOWERS



THESE TOWERS were designed so that they can easily be built up from the ground a piece at a time. Great care should be exercised in preparing the foundations to make sure that the base of the tower will be exactly square and level. We furnish blue prints giving all dimensions clearly.

When requested we ship the anchor rods in advance so that the foundations can be prepared before the tower arrives. After the foundations are set the tower can be built up as shown in the pictures below. The stairs and landings should be put in place as the work progresses and then only a few pieces of plank will be needed for staging.



*Photos by Forest Service, State of Virginia*

## ERECTING TOWERS

THIS PICTURE shows a convenient type of gin pole. While it is somewhat heavier to handle than a single pole it has the advantage that when once in position two or more sections of the tower can be put on without moving the pole.

For a single pole, a light cedar pole from 14 to 16 feet long will be found very satisfactory and easy to handle.

*Photo Courtesy West Virginia  
Forest Fire Service*



The erecting crew should consist of a foreman and four or five men. There should be two men on the ground to pick out the material and pull it up, one man on the tower to receive the material and pass it on to the two assemblers. Another man can be used to advantage to tighten the nuts after the erectors have completed a section of the tower.

*Photo Courtesy Forest Service  
State of Virginia*

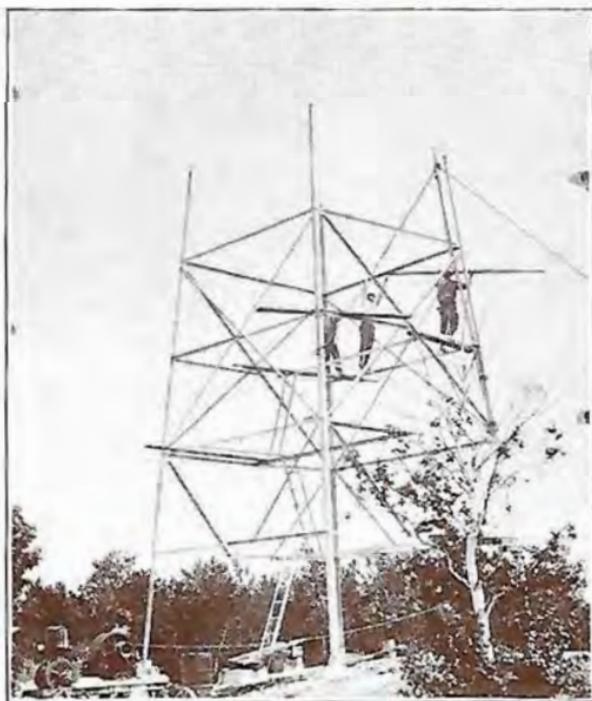
## ERECTING TOWERS

THIS cut shows six men completing the erection of a 47-foot tower of the I.S.-40 Type. These towers are designed so that they are easily and quickly built up from the foundations. As each section is assembled the stairway and landing are put in place, making it safe and easy for the men to go up and down the tower.

Every piece or bundle has its part number stencilled on it. The loading list which accompanies the invoice has the same numbers listed with a full description of every part. The blue prints show the location of every piece.



*Photo Courtesy Maryland State Department of Forestry*



THIS shows an 80-foot tower of the I.X.-25 Type in course of erection. By means of a light gin pole and tackle the corner posts are hoisted into position. The lighter pieces are easily pulled up with a hand line.

All parts should be sorted out and laid together on the ground as nearly as possible in the order in which they will be assembled. Much time is saved by sending up to the men on the tower just the piece they will need next.

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## **FIRE CONTROL**

**It requires a lifetime  
to grow timber.**

**Fire will destroy it in  
a day.**

**Every reasonable and  
effective means should  
be adopted for the pro-  
tection of one of our  
greatest natural  
resources.**

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