

PRESERVING TREES.

Successful Work Done with Noble Elms in Connecticut Valley.

Shading the fine streets of several old towns in the Connecticut Valley are stately trees, some of them more than two centuries old, which owe their present existence to the interest and skill of a man who has reduced the art of tree preservation to a science. That man is Christopher Clarke, city forester of Northampton, and some of the trees whose life has been thus prolonged bear close association with men and events that played a prominent part in the early history of the nation. Among them are the Jonathan Edwards elm, in Northampton, the Indian house tree, in Old Deerfield, and the General William Shepard elm, in Westfield.

Although still one of the most active men in the Connecticut Valley, Mr. Clarke is now an octogenarian, his eightieth birthday anniversary having been celebrated at a banquet given by citizens of Northampton a few months ago. Mr. Clarke unites a love of nature with a fondness for antiquities. For more than half a century he has had the care of the shade trees in the streets of Northampton, and he has great regard for a noble tree, so that the preservation of historic trees is for him a work of love.

In a historic town like Northampton it is a source of much satisfaction to the residents to be able to point out a tree which was planted by the eminent theologian, Jonathan Edwards, although the body of the former Northampton pastor and the house which he lived in in course of his ministry in the town have long since been reduced to dust. Modern conditions of urban life make the growing of healthy trees in streets a more difficult undertaking every year, and it is therefore deemed worth while to spend time and money in adding to the years of one of those stately, graceful trees planted by the ancestors of those who now pass under their protecting shade.

Visitors who admire some large and healthy looking trees are surprised when informed that their trunks contain tons of cement where there was formerly healthy wood. Not infrequently decay starts in a tree and eats through a large portion of the inside of the trunk and into some of the larger limbs. Unless heroic measures are adopted the tree will then wither and die. Sometimes a large limb is torn from a tree in a storm, leaving the inner wood exposed, and decay follows.

When a tree doctor treats a decayed tree he begins by cutting an aperture in the tree large enough to allow him to get at the inside and remove all the decayed wood. This is essential to the success of the operation. When this work has been done the cavity is ready to be filled. The composition used in case of large fillings contains five parts of sand to one part of Portland cement, except for the outer part, where these ingredients are used half and half, this outer coating being several inches thick. To hold the cement in place while it is hardening a stout tin or zinc is employed, this being secured to the trunk or limb in a way to preserve the natural shape. The tin is put on in strips,

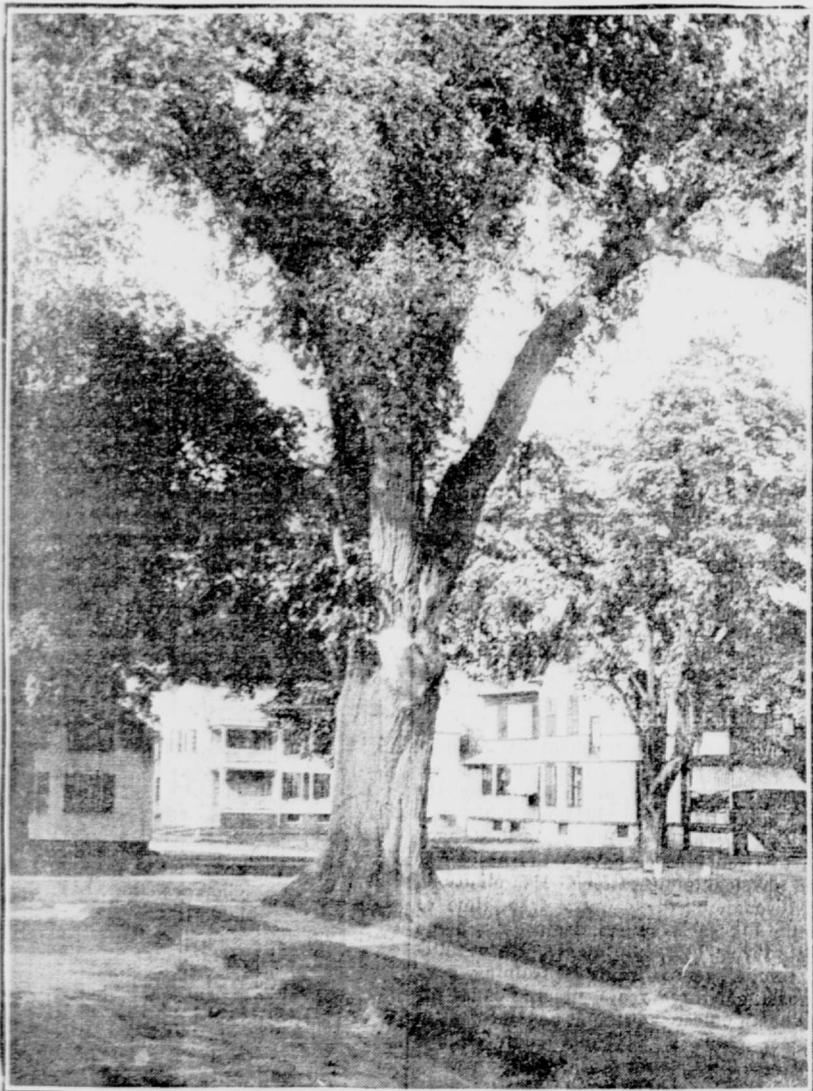
being fastened with round steel nails having a broad head and a small shank. The strips are wide enough to lap over upon the sound wood and the nails are placed from half an inch to an inch apart, according to the strain imposed.

The first strip of tin is put on at the lower part of the aperture, and the cement put in until it reaches nearly to the top of the tin. Then a second strip is put on, lapping over the other two or three inches, and the two together. Then more cement is used, and so on until the cavity is filled, the last strip of tin being bent down while the final application of cement is being puddled into place and the cavity entirely filled, and then it is straightened up and nailed in place. In case of extra large cavities large sheets of tin or sheet iron are nailed on the outside to prevent the tin from bulging out, until the cement has hardened, when they can be removed. The smaller the cavity the larger are the strips of tin employed, as the strain is proportionately less. In twenty-four hours' time the cement will have hardened completely and the tin may all be removed.

This remedy is applied successfully to fruit trees as well as shade trees. Mr. Clarke has



CHRISTOPHER CLARKE.
Northampton's city forester and a noted tree doctor.



THE GENERAL WILLIAM SHEPARD ELM, WESTFIELD, MASS.
Also preserved by the liberal use of cement.



THE JONATHAN EDWARDS ELM IN NORTHAMPTON, MASS.
Planted by the famous preacher. It contains three tons of sand and cement, placed in its trunk to preserve it.

in his own dooryard an apple tree seventy-five years old, to which a large quantity of cement has been applied. This was done at a cost of about \$150, and the tree is now bearing four different varieties of apples.

The largest fillings Mr. Clarke ever put in a tree were in the Jonathan Edwards elm, in Northampton, in which three tons of sand and cement were used. This tree was planted more than one hundred and seventy-five years ago by Mr. Edwards in the early part of his ministry in Northampton. The trunk is now about twenty-five feet in circumference, and formerly the tree had immense spreading branches and was one of the handsomest trees in the state. Much work was involved in treating this tree, and the expense amounted to about \$125. The tree is preserved chiefly for its historic interest, its beauty having been sadly impaired.

The fact that Jonathan Edwards formerly dwelt in the shadow of this tree is not the only interesting association connected with it. On the site of the old Edwards home stands a house in which was reared a family of celebrated scholars. This was the Whitney family, comprising Professor Josiah Dwight Whitney, geologist, metallurgist and member of the Harvard faculty; Professor William Dwight Whitney, of Yale, the Sanscrit scholar and government philologist; James Lyman Whitney, formerly librarian of the Boston Public Library; Henry Mitchell Whitney, formerly a professor in Beloit College and now librarian of the Blackstone Memorial Library, in Branford, Conn., and others. The Whitney house has been bought for Betty Allen Chapter, Daughters of the American Revolution, of Northampton, and also will be the home of the Northampton Historical Society.

One of the most interesting of all trees in the Connecticut Valley is the Indian house tree, in Deerfield, believed to be nearly two hundred and fifty years old. The house which formerly stood by this tree was the one attacked by the Indians on February 29, 1704, when many white captives were carried away to Canada and others slain. The door of the old house, scarred by tomahawks and bullets, is still preserved in the Memorial Hall in Deerfield. The tree is nearly one hundred feet in height. It has been preserved and strengthened by the use of 3,500 pounds of cement and heavy iron rods to stay the limbs.

Another fine tree that has been preserved by this means is the General William Shepard elm in Westfield, a memorial of a brave Revolutionary officer and the man who commanded the troops which put down Shays's rebellion. The man whom the town of Westfield is now planning to honor by a monument in the public square, and who looked out of his front parlor windows at this tree, was one of the most picturesque figures in the history of Western Massachusetts. He was a native of Westfield and died in that town in 1817 at the age of eighty. He served in the French and Indian War under Lord Amherst and joined the Continental forces in Cambridge in the spring of 1775. He fought in twenty-two distinct battles of the Revolution and became a brigadier general under General Lafayette. As the head of the county militia he put down the insurrection led by Daniel Shays in 1786, the climax of which came in the attack upon the arsenal in Springfield and the

repulse of Shays's men by General Shepard. As a Presidential Elector General Shepard voted twice for George Washington, and he also served in Congress.

Still another historic tree, and perhaps the most beautiful in the list, is the Washington elm in Suffield, which is to be preserved in the same way as the others. This tree is at the lower end of the common in Suffield and formerly fronted the old Porch House, where it is said that Washington sometimes stopped. It was one of a pair of noble trees called "the sentinel elms," one of which was blown down in a winter storm nearly forty years ago. These trees were planted, it is said, by Benjamin Ruggles, the first minister of Suffield, in 1635. When the Revolutionary War broke out a company of men paraded under the elms preparatory to starting for the front. While stopping at a Suffield tavern Washington, it is related, made a speech under these trees, urging men to go to the front in defence of their country. A large branch was recently broken from the survivor of this pair of elms, leaving the tree in need of repair, and it is probable that its treatment will be undertaken by Mr. Clarke, and this fine old tree will be preserved for an indefinite period.

SIAM PISTOL DUELS.

A curious feature of the great tournament of arms which took place the other day at the Tuilleries in Paris was the pistol duelling. Formerly a sham duel could be fought only with the sword, in which case it differed little in appearance from the real contest. With firearms it seemed impossible to arrive at any exact simulation, and all that could be done was to place the combatants opposite silhouettes representing the enemy. Under these conditions the combatant did not see the pistol aimed at him and could not be struck by the hostile bullet. Now the bullets have been rendered harmless, like the swords.

This is accomplished by means of a fake cartridge, the invention of Dr. Devillers. It is surmounted by a wax bullet and feebly charged with an explosive composition, the force of this charge and the weight of the bullet being so regulated that the latter cannot pass beyond a circle twenty centimetres in diameter. The bullet is a soft mixture of wax, tallow and sulphate of baryta and weighs three-quarters of a gram. At twenty metres its shock is insignificant, but clearly perceptible. It is entirely harmless unless it strikes the face or the naked hand, and the combatant having taken care to protect his face and hand can enter the pistol duel with perfect safety. Yet the combat looks as real as that of the sword.

ALL HAIR ON FACE AND ARMS

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