

should be. In a tree, however, as in society, there ought to be a leader. We recognize and respect the leader in the pear tree, and we ought to in the apple tree. We make three serious objections to the prevailing method of trimming. Cutting out the central leaders we injure the symmetry of the tree; we weaken it and make it liable to split; and the fruit is not so well exposed to air and light. If the centre is preserved, the side branches are well joined to the trunk like the thumb to your hand, and will bear a strain; if the centre is removed the branches grow like the fingers of your hand, and do not bear a strain so well. The inverted umbrella shape looks open on the start, but as the limbs develop the south side branches take the sun, shading the north side; the light and air are not as well admitted as when the branches shoot out literally from a central column.

DISTANCE IN THE ROWS.

It is a grave question how far apart trees should be planted. There is some reason to believe that apple trees twenty feet apart, properly thinned and shortened in, will yield more fruit to the acre than if planted thirty five feet apart. Tops must be open and trees must not crowd each other. Planted near together, they must be rigidly shortened in—dwarfed in a measure. Each year's growth must be cut back to two or three buds, and the top held to the space allotted to it, so there shall be no crowding. Now, will not this cutting back produce fruitfulness, as with the grape vine? Will not the wood be firmer, the tree harder, and the fruiting better for this circumvention? One thing is certain, the trees being numerous draw more evenly from the soil. Being smaller in size, they do not draw so heavily from their immediate locality. The draft on the soil is more evenly distributed. Two or three significant facts confirm this theory. One of the most noted orchards in the State, the Smead orchard, of Pavillion, gave \$1,370 worth of fruit in 1862, \$4,100 in 1864, and \$4,500 worth of fruit in 1865, and consists of six acres, planted less than twenty feet apart. The only other orchard we can hear of that makes as good a showing is an orchard of trees belonging to Mr. Connable, of Warsaw, which in several different years has yielded \$1,000 worth of fruit; it is also planted less than twenty feet apart. A theory with such a backing may well be looked into.

REPLY TO INQUIRY CONCERNING TAP-ROOTS, PAGE 88.

Mr. J. A. Mackay, Winona, writes, in answer to Mr. J. W. Cumming:—"Forty-five years ago a road was cut through the old Jesuit orchard at Quebec. The trees were said to be over a hundred years old, and though neglected were said to bear well. Under each tree was a flag of magnesian limestone, which must have been brought from a distance."