

mences. You can draw out your hose from the bottom of the lake from time to time, examine and cleanse the wire screen just below the surface of the water and let it down into the bottom again. This is so convenient.

Sometimes the crawfish will give you an exit and save you the trouble of emptying your lake. The crawfish always begins to pierce the dam an inch below the surface of the water above. Then he descends in a devious way to the other side. He soon makes a spring. If that crawfish had to pass through a bed of loose, wet sand he would never make it. Guard his entrance, determined by the above natural instinct, with a layer of six or eight inches of sand and he will not turn off the lake any more. The sand falls in faster than he gets it out. You have beat him.

Never plant a deciduous tree, nor let one stand inside of the lake inclosure. Every leaf will tumble before the wind, and rests not until it sinks to the bottom of the water. This will render the bottom of the lake filthy and the water impure. Evergreen trees will not do this. Their needle-shaped leaves behave themselves, and lie under their own trees to decay. Almost every lake which lies in a hollow or ravine has a considerable watershed above. The water collected by this wide table of land must be turned around the lake and emptied into the ravine below. In order to do this it is not absolutely necessary to make one large ditch on both sides of the lake. A large ditch begun above, by running across the ravine obliquely at the head of the lake and continued to an exit below, is sufficient to discharge the floods that come from hills or fields above. It is desirable to have one side of the lake accessible by an easy descent through a floral garden or undulating lawn. The water which runs into the lake on the other side may be turned away by a few furrows nicely engineered along the hillsides, so as to empty below the lake also. These striations can be worked into the general design for effect.

---

#### **RESULT OF PLANTING SHAD IN THE MUSKINGUM RIVER.**

**By CHAS. W. SMILEY.**

Young shad were planted by the United States Fish Commission in the Muskingum river at Bayard, Ohio, in 1875, and at Zanesville in 1876. Mr. G. H. H. Moore, a messenger of the Fish Commission, reported May 26, 1882, that while on a trip with fish to the Ohio river he was informed that fifty white shad had lately been taken at the State dam near New Philadelphia, Ohio, from the Tuscarawas river, which is a tributary of the Muskingum.