

monly the case. This secures a steadier aim, the injurious angle is decreased, and makes a much longer extent of gut line possible. The place where the gut line touches the point of the shank is much less exposed to any motion, and the frequent breaking of the gut at this point is avoided. These hooks, however, are as a general rule only suited to such bait as will cover the entire shank. It certainly speaks well for these hooks that they were almost simultaneously adopted both in England and America.

2. Warner's needle-eye hooks. The new catalogue of J. Warner & Sons, Redditch, shows a whole series of differently constructed spring double hooks (eight in number). Other hooks of this kind have been known in Germany for some time; a hook of a particularly practical construction was exhibited at Berlin by the firm of Bradford & Anthony, of Boston, Mass.

The same firm has introduced a hook which substitutes an entirely new principle for the beard. As the tongue which takes the place of the beard acts like a spring, the mouth of the fish will, in biting, slip past the point of the tongue, almost without meeting with any resistance, and from that moment any loosening of the hook by accident becomes impossible. Unless something tears or breaks, the fish is hopelessly caught. The considerable angle of this hook will give no trouble, considering the ease with which the slender point enters; in fact, it proves an advantage, because the catching capacity of the hook is thereby considerably increased. The principle underlying this hook is doubtless very ingenious, and unless unforeseen difficulties hinder its practical application, we probably stand at the threshold of a new epoch in the history of the fish-hook.

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**147.—CALIFORNIA TROUT PLANTED IN ROANOKE RIVER IN JULY, 1883, RETAKEN IN JUNE, 1884.**

**By MARSHALL McDONALD.**

There was received to-day, by express, from Capt. J. W. Sumpter, Big Spring, Roanoke County, Virginia, a California trout weighing, when fresh, about 10 ounces. This was taken in Roanoke River in the vicinity of Big Spring, and is one of 50 planted therein in July, 1883, having been hatched at Wytheville, Va., in March, 1882, from eggs taken at Baird Station, California, and forwarded by express to Wytheville.

Captain Sumpter states that this is the third trout taken, the others having been returned to the river. He says there are a great many small ones, about an inch long, in the branch and the pond, running in schools of 10 or 15 each.

WASHINGTON, D. C., *June 16, 1884.*