

STATIONARY GEAR WORKSHOP #1
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A GUIDE TO THE CONSTRUCTION OF FYKE NETS

- terminology
- gear illustrations
- net design and assembly

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FYKE NETS

Introduction

A fyke net is a small trap. It is a static type of fishing gear that is placed in inshore areas usually near bays and rivers. Originally Norwegian and Danish gear types, the fyke net was introduced into this country and used extensively for eels in Maine at the turn of the century. In the late 1800's fykes were modified to capture flounder in coastal areas and for white perch in rivers and streams.

Many small scale fisheries employ static or passive gear types. Not only is this gear type fuel efficient but it lends itself to improved fishing technology and management. Static gear also produces a very high quality product.

Fykes are made of three distinct parts — the barrel, leader and wings. The leader acts as the name suggests and guides the fish into the barrel. Two throats trap fish between hoops of the fyke barrel. The size of the meshes within the webbing determines the size of the fish retained. Small fish can escape through the meshes.

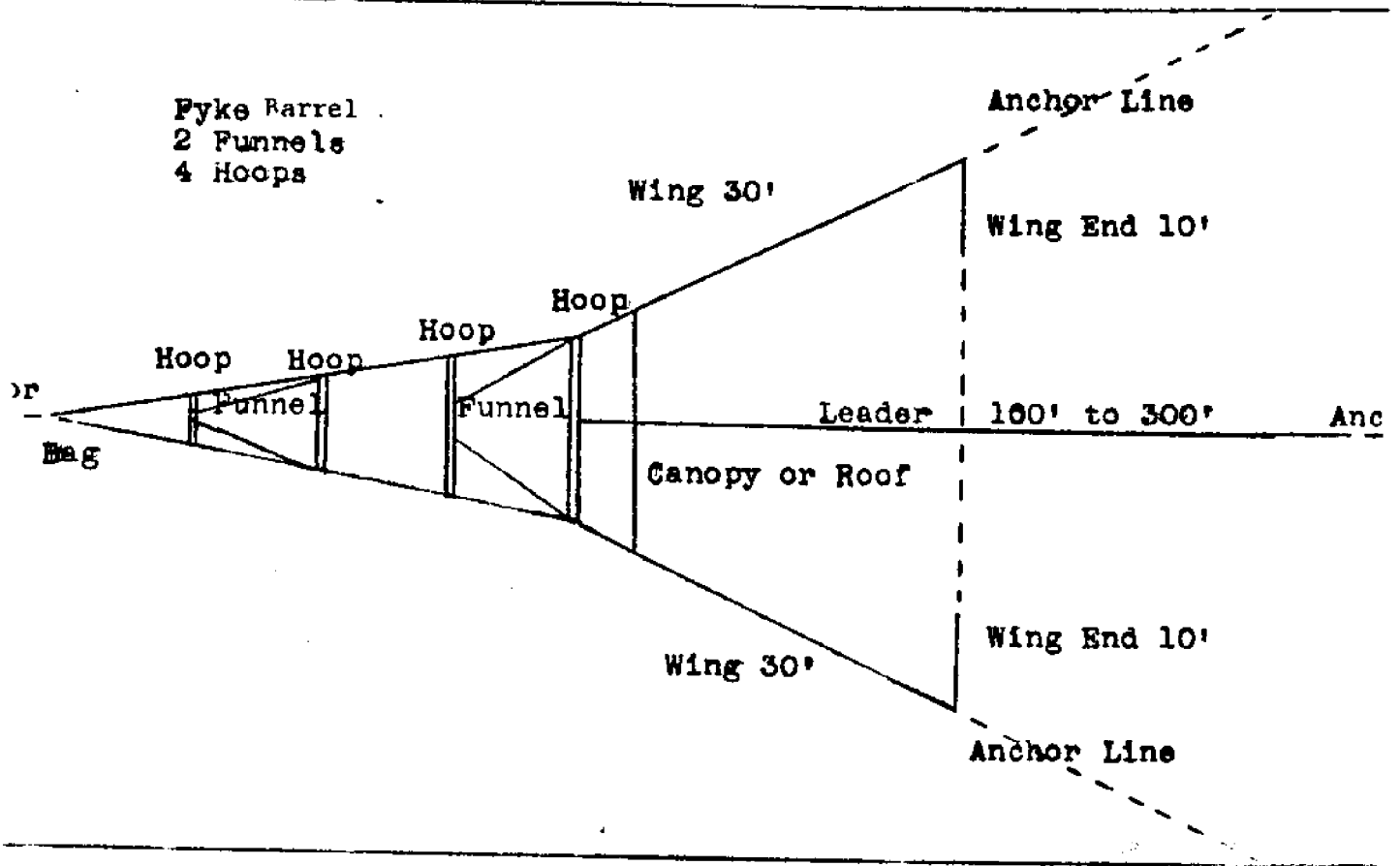
Fykes are fished in 10 to 50 feet of water and are made of nylon webbing hung to round hoops of wood, galvanized steel or cut fiberglass. Fiberglass hoops hold up the best but are expensive. A leaded line keeps the leader on the bottom and floats evenly spaced on the leader and wings allows the fyke to fish. Anchors keep the fyke stationary and below the surface. If rough weather prevents checking the gear, the fish will remain alive and will not spoil. If possible fykes should be checked daily.

TERMS

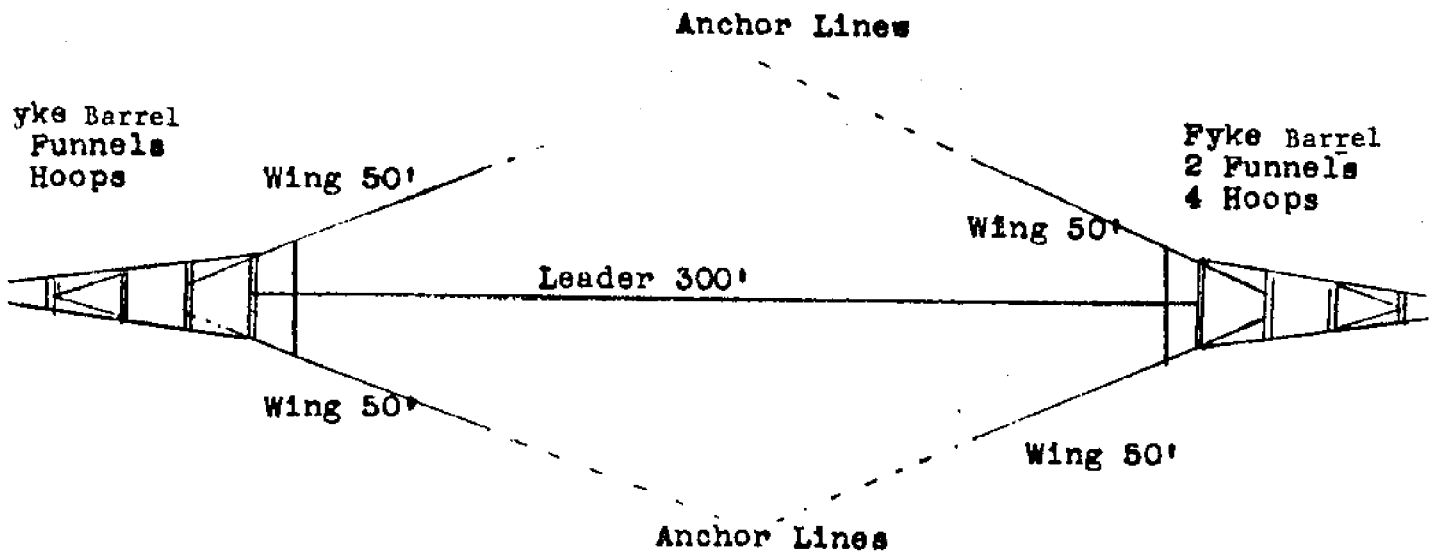
- loop - Fykes can be constructed from fiberglass, wood or galvanized steel round hoops with various dimensions.
- leader - Leaders are used to direct the fish into the fyke mouth. They are usually attached to the first hoop and can vary as to length.
- Wing End Line - The line that separates the floatline from the leadline on the wings and ends of leader.
- Up and Down Line - Same as wing end line.
- Sider - The part of a mesh where two pickups have been cut. A sider lies on the side of a mesh and will unravel when the two adjoining bars are cut.
- Pick Up - The part of a mesh that will not unravel and lies in the direction of pull.
- Sidering - A process that starts at a 3 legged mesh and then proceeds to alternate siders and finishes at a 3 legger.
- Picker - A process that starts at a 3 legged mesh and then proceeds to alternate pickups and finishes at a 3 legger.
- Waper - To create by subtraction (cutting away mesh) from a wide end gradually decreasing to form a narrow end out of a square piece of webbing.
- Hanging Ratio - The hanging ratio refers to the length of stretched mesh to length of floatline or leadline.
- 3 Legger - When a four sided mesh is torn or ripped, 3 legged mesh are created. A 3 legger is very important in mending net sections and joining net sections together. A 3 legger signifies that a knot only has 3 strands of twine attached to it instead of four. When mending webbing or joining web sections you start on a 3 legger and finish on a 3 legger.
- Float Line - The line that floats and webbing are attached forming the top of the wings and leader.
- Lead line - The line that leads and webbing are attached forming the bottom of the wings and leader.
- Sider Knot - A knot made on a sider consisting of one half hitch below the sider followed by a half hitch above the knot.
- Pickup Knot - A pickup knot is a single sheet bend. A pickup will not unravel unless cut and are made in the direction of pull.

- Floats
- Buoyancy is needed to keep the canopy, wings and leader properly set in the water regardless of depth. Floats can be molded or cut and usually are made from expanded foam or hard plastic. Floats have various inside hollow diameters (holes) according to the size of the floatline used. Remember for the floats to slide on the floatline the float hole should be larger than the floatline diameter.
- Leads
- The bottom of the fyke wings and leader must have weight on the bottom lines so that they will sink. Usually leads are used for this purpose. Leads can be either a molded sinker type with various hole or cut hollow lead tubing. Remember for the leads to slide on the leadline the lead hole should be larger than the leadline diameter.
- Cross Twine
- When webbing is made on a machine or by hand, it has a characteristic "run of the twine" that is the sheet bend knots are made in the direction of pull. (As tension is applied the knots will tighten and not loosen). Pulling the webbing from the siders instead of the pickups will result in a distortion known as "cross twine" which is wrong. The sider knots are knots at the side of a mesh, the pickups are at the top and bottom of a mesh.
- Bar
- The length of one side of a four sided mesh. (A mesh will have four bars).
- Square Measure
- The length of one bar.
- Stretch Measure
- The length of two bars when the mesh is held taut. *Note some manufacturers will include one knot in the stretch measurement.
- Sheet Bend
- The knot used in the construction of webbing also called the pickup knot.
- Anchor Bridle
- Two lines (one from the floatline and one from the leadline) that combine to form a single anchor line. Anchor bridles are used to set fyke net wings and leaders.
- Points
- A point is a term to signify a sider when tapering.
- Thread Count
- American system of determining the diameter of twine. Small thread counts equals small diameter twines, large thread counts equals large diameter twine.
- Canopy
- The webbing that forms the over hang before the first hoop of the fyke.
- Roof
- Same as canopy.
- Funnel
- Funnels are tapered sections of webbing that forms a circular guide for fish entering the fyke.
- Throat
- Same as funnel.

SINGLE FYKE



Double Fyke

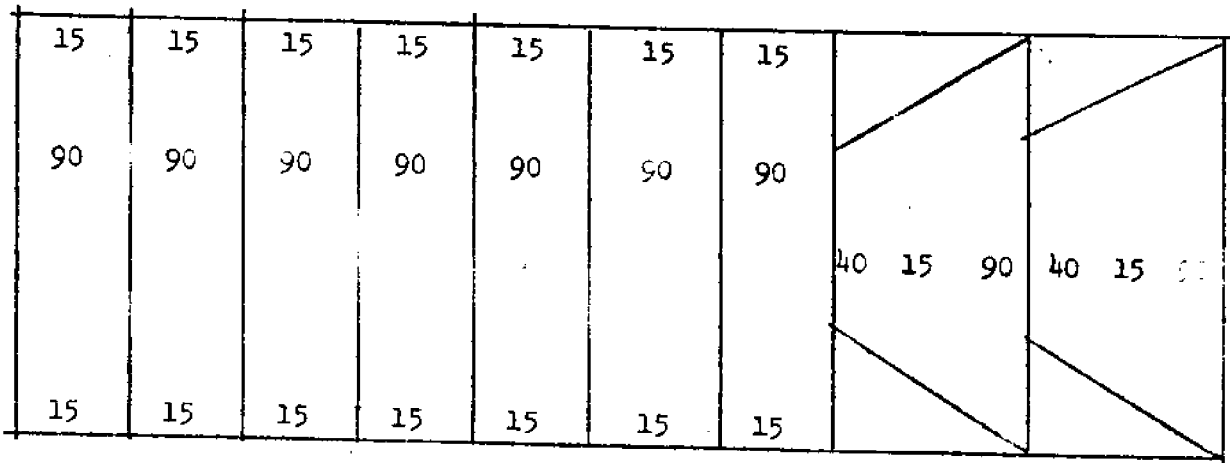


BLOCK PLANS FOR FYKE NET

Wings and Leader 300 x 100 #9 Thread 1" Webbing

	300						
	36	WINGS					
	300						
	300						
	31	LEADER A					
	300						
	300						
	31	LEADER B					
	300						

Sections and Funnels 145 x 100 #9 Thread 2" Webbing



* Note - Sections for fyke barrel are not cut out in seven sections. The entire section block is sewn together forming a cylindrical tube.

CONSTRUCTION DETAILS

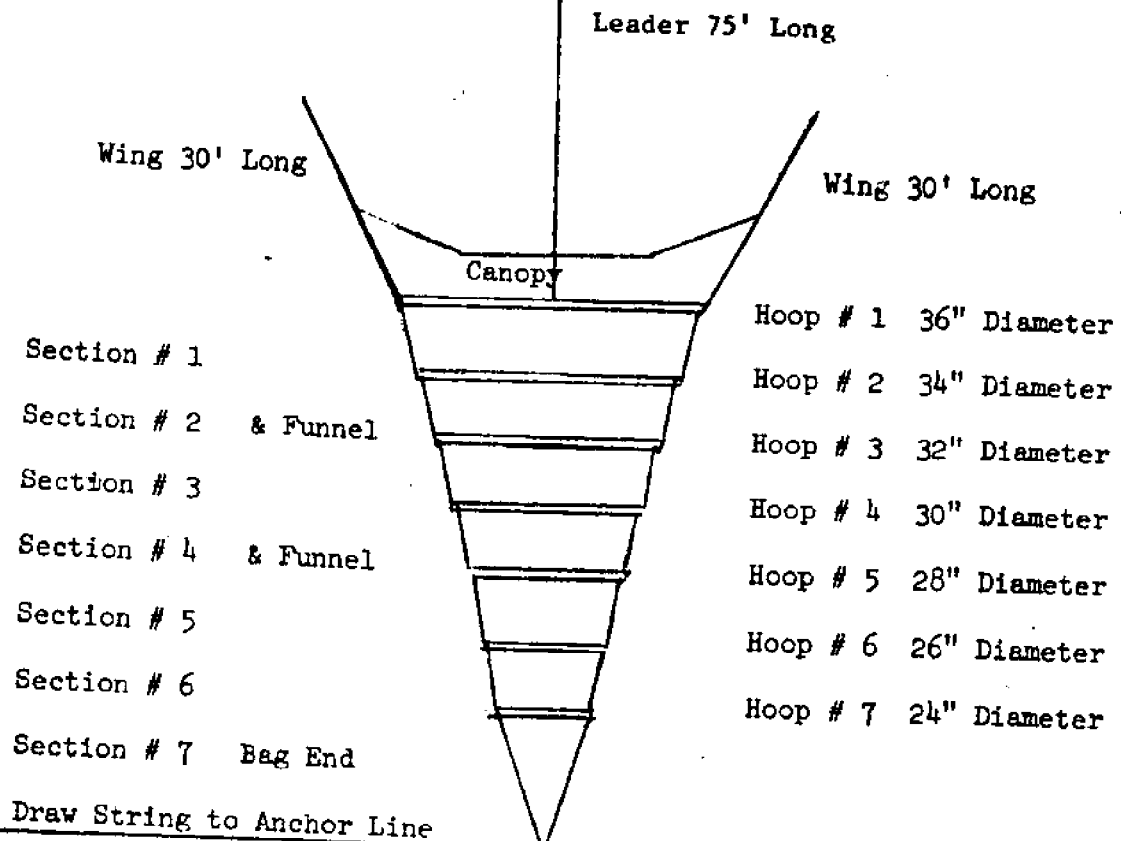
Leader

The leader will be 31 meshes deep and 600 pickups long. Floatline will be 3/16 inch braided polypropylene line with a #125 plastic float spaced every 30 inches. The leadline will be 3/16 inch braided polypropylene line with a one ounce lead spaced every 12 inches. The hanging ratio for the leader will be 1.8 to 1 or 3 meshes are hung in 5 inches of leadline or floatline length.

Wings and Canopy

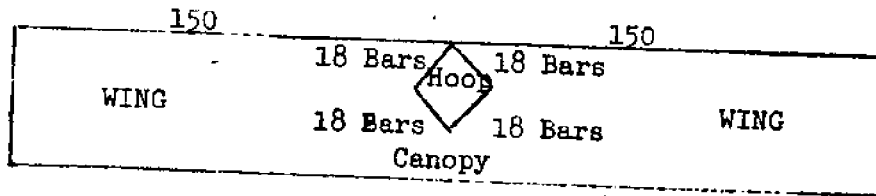
The wings and canopy are formed from one sheet of webbing. The total webbing square needed will measure 300 pickups (meshes) long and 36 sidars (meshes) deep. To form the canopy and the two wings a bar cut is made at the midway point on the webbing square. (See Cutting Plan for Wings). This bar cut is 18

7 Hoop Fyke Net

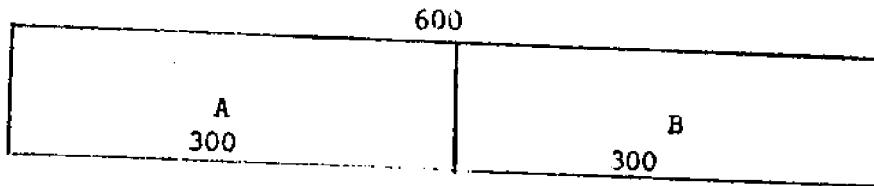


CUTTING PLANS FOR FYKE NET

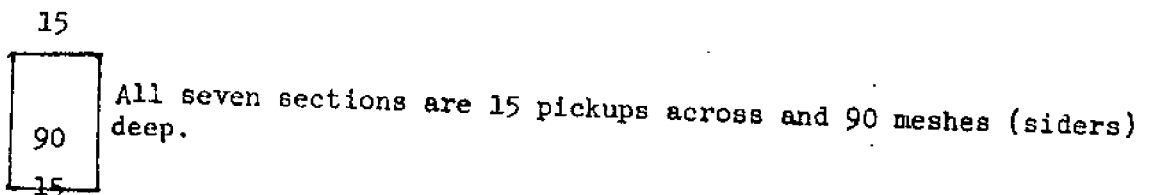
WING



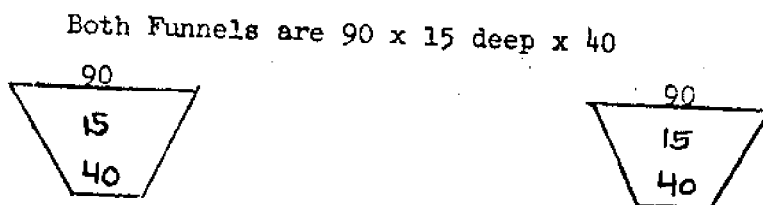
LEADER



SECTIONS



FUNNELS



bars long to a sider, then cut 18 bars to a pickup and then cut back 18 bars to the opposite sider and back 18 bars to end where you made your initial bar cut. This will leave a triangle in the webbing square and this is where the first hoop is laced. The ends of the webbing square now become the wings and the difference between the bar cut triangle for the hoop and the width of the webbing becomes the overhang or canopy. The wings and canopy are hung the same as the leader on 3/16 inch braided polypropylene line with 3 meshes hung every 5 inches. Floats are spaced every 30 inches on the float line and leads being spaced every 12 inches on the headline.

Fyke Barrel

The fyke barrel is created by lacing the sections to the fiberglass hoops. The fiberglass hoops are laced in place every 16 meshes to form the fyke sections. The meshes are laced on hoops are spaced according to the hoop diameter.

- Hoop #1 Circumference = 113 inches, lace one mesh on hoop every inch and a third.
- Hoop #2 Circumference = 107 inches, lace one mesh on hoop every inch and a quarter.
- Hoop #3 Circumference = 100 inches, lace one mesh on hoop every inch plus.
- Hoop #4 Circumference = 94 inches, lace one mesh on hoop every inch.
- Hoop #5 Circumference = 88 inches, lace one mesh on hoop every inch approximately.
- Hoop #6 Circumference = 82 inches, lace one mesh on hoop every inch approximately.
- Hoop #7 Circumference = 75 inches, lace one mesh on hoop every 3/4 of an inch.

Funnels (throats)

The two funnels are on the second and fourth hoop of the fyke barrel. The wide end of the funnel is 90 meshes around the depth is fifteen meshes and 40 meshes around at the narrow end. The taper is 2 bars 1 mesh 3 bars 1 mesh. The funnels are laced to the hoop as the sections are. Funnels are held in position by twine ties.

MATERIALS NEEDED TO BUILD THIS FYKE

300 by 100 meshes deep #9 thread 3 inch webbing.

145 by 100 meshes deep #9 thread 2 inch webbing.

7 fiberglass hoops.

300 feet of 3/16 inch braided polypropylene rope.

45 #125 5 inch long plastic floats.

140 #16 one ounce leads.

2 pounds #9 thread sewing twine.

Lines and anchors to set leader and wing.

Line and anchor to set end of fyke.

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