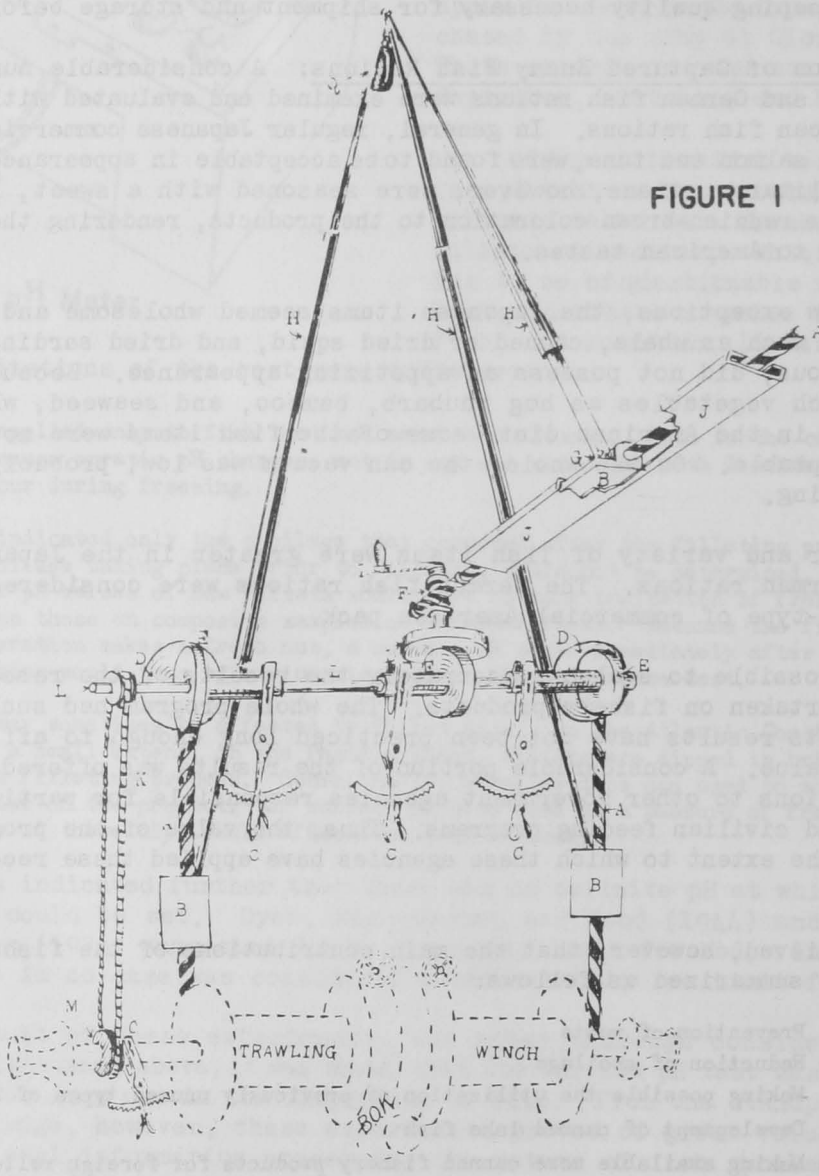
A TRIPOD DERRICK FOR SMALL FISHING VESSELS

By Boris O. Knake*

The present types of mast and boom rigs, with guys and fastenings, often interfere with operations on the decks of smaller fishing vessels and with the hauling or setting of lines and nets. The tripod derrick, illustrated in Figure 1, offers a method of eliminating many of the shortcomings of present installations. Its use, however, necessitates the construction of a pilot house that is reinforced to carry the load of the hoist.

FIGURE 1



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The hoist consists of three booms. The upper ends of the booms are fastened together in a universal joint. The lower ends of each boom are fixed to a shoe which, in turn, is held in a track in which the shoe slides freely. Each shoe is threaded to ride a screw. As the screw is turned, either by hand or by a power take-off, the shoe slides to a new position on the rail. This movement raises or lowers the hoist or swings it to either side, thus bringing the block and tackle into any desired position. The hoist will hold steady at all times.

Figure 1 is a diagrammatic view of the installation as seen from the operator's post inside the pilot house.

HHH - Three booms forming a tripod.
G - Goose-neck by which boom is joined to shoe.
B - Shoe that slides in track J which receives it power from screw shaft A.
J - Shown only for horizontal rail that is affixed to roof of pilot house.

The two vertical tracks are omitted from the diagram for clarity. Other parts of the diagram show a system of transmitting power to the three screws AAA. Other methods for transmitting power may be employed if desired. In the illustration, the winch supplies force through the clutch O to the cogwheel M by means of the chain H, which turns the end-shaft L. Three reversible disc clutches in this shaft activate the screws AAA. The handles PPP (two are hidden in the shafts by the discs DDD) can be used for hand adjustments of the hoist when the power is off.

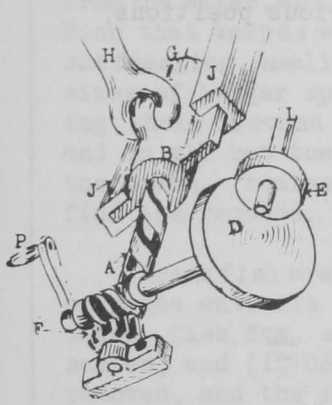
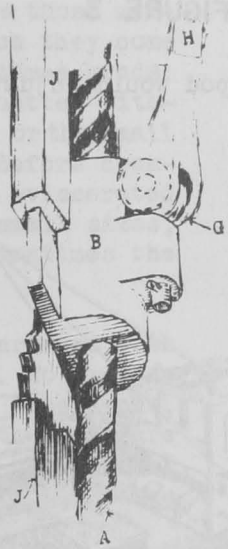


FIGURE 2A



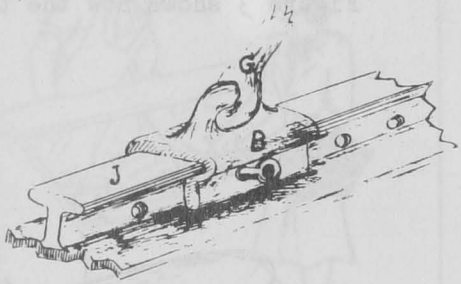


FIGURE 2B

FIGURE 2

Figures 2, 2A, and 2B show three suggested construction details of the shoe and rail assembly.

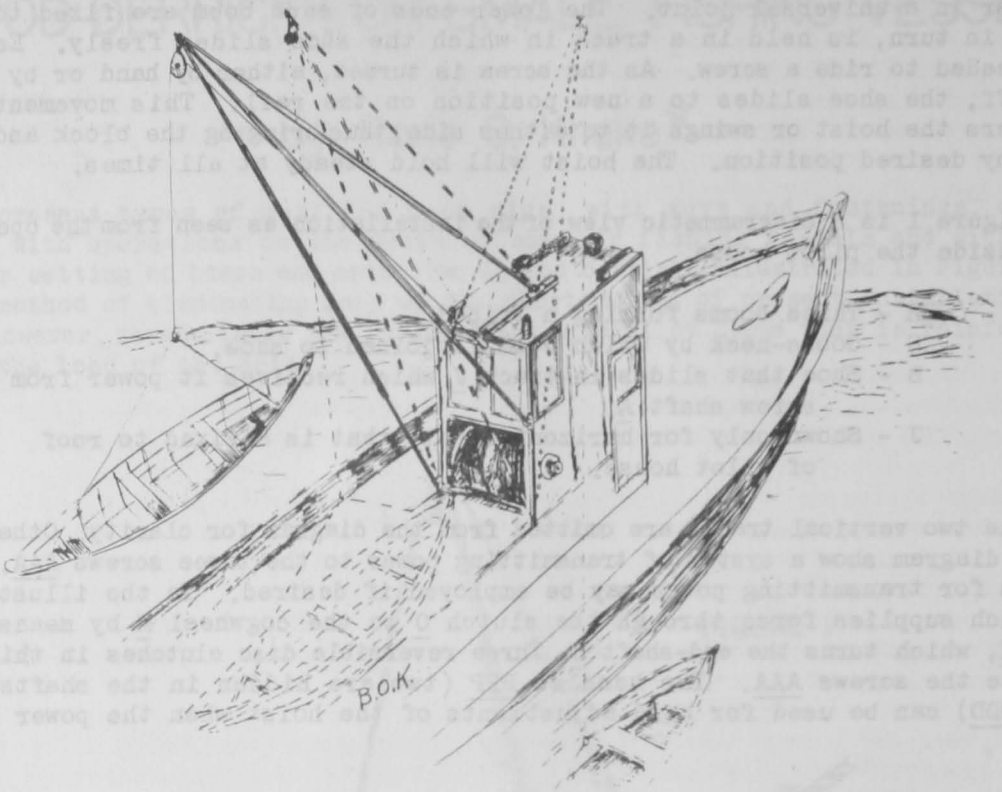


FIGURE 3

Figure 3 shows how the tripod would adjust to various positions.

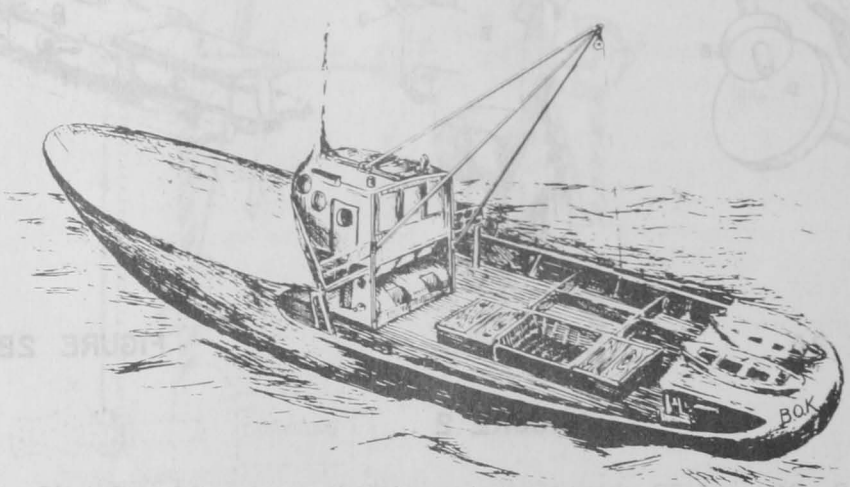


FIGURE 4

Figure 4 illustrates a futuristic version of an otter trawler that combines designs of East and West Coast fishing vessels.

A - Main worm screw
B - Traveler
C - Clutch levers
D&E - Disc clutch, reversible
F - Worm screw transmission
G - Goose-neck
H - Tripod legs
J - Slide track
K - Chain drive
L - Chain gear sheave
M - Chain gear sheave with clutch
O - Clutch on winch shaft
P - Hand crank (removable)
Q - Block for hoisting

MARKET FORMS OF FISH

Fresh (refrigerated) fish and completely frozen fish should be equally good if the freezing is done by the modern methods now well known to the industry. Both are marketed in a variety of convenient forms, as follows:

Whole or round fish are those marketed in the form in which they come from the water, and are of three kinds: Fish that keep as well or better without freezing, small fishes, or the small sizes of larger species. Before cooking, whole or round fish are eviscerated and in all but the very small sizes, the heads, scales, and sometimes the fins are removed.

Drawn fish are those marketed with only the entrails removed. To prepare these fish for cooking, the heads, scales, and (if desired) the fins are removed, and the fish may be split or cut into serving portions if too large to be cooked whole.

Dressed fish have had the head and entrails removed and the tail and fins may be cut off. If dressed fish are large they may be cut into pieces in preparation for cooking. Very large dressed fish are sometimes marketed in pieces.

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